Stump and Breast Height Diameter Tables for British Columbia Tree Species

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ABSTRACT

This report contains tables and regression coefficients for estimating breast height diameters from stump measurements, and for calculating stump radius inside bark at desired stump heights (for logging waste measurement). The tables and regression coefficients are presented by species, age class, and forest inventory zone, for the 33 species groups in British Columbia.

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INTRODUCTION

The tables (Tables A1-A33) in this report are to be used to estimate diameter at breast height outside bark (DBH) from stump diameter **inside** bark (DSIB) measured at a fixed height (SH) above germination point. They replace the tables developed by Demaerschalk and Omule (1978), in which DBH was estimated from stump diameter **outside** bark.[1]

Each of the new tables was derived from a regression equation that was fitted to butt diameter measurements (below 2.0 m) of the same trees used in the British Columbia Forest Service metric volume equations.

The regression equations are of the following form:

$$DBH = DSIB + b_0\, DSIB\, (2.3 - SH) + b_1\, DSIB\, \ln[(SH + 1.0)/2.3]$$

where

DBH = diameter at 1.3 m outside bark (cm)

DSIB = diameter at stump height (SH) inside bark (cm)

SH = stump height from the point of germination (m)

b_0, b_1 = regression coefficients

ln = natural logarithms

This equation is similar to that of Demaerschalk and Omule (1978), which was modified to estimate DBH from stump diameter inside bark instead of from stump diameter outside bark.

Note that in the above equation, when SH = 1.3, b_0DSIB will provide double bark thickness at breast height; that is, 100 * b_0 = percent double bark thickness based on diameter inside bark at breast height.[2]

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[1] Demaerschalk, J.P. and S.A.Y. Omule. 1978. Stump and breast height diameter tables for the British Columbia merchantable tree species. Faculty of Forestry Report, Univ. of B.C., Vancouver, B.C.

[2] More information on the fitting of these equations can be found in: A. Kozak. 1989. Estimating breast height diameters from stump measurements. Contract report for the B.C. Ministry of Forests Research Branch, Victoria, B.C.

TABLES

The tables to estimate DBH for the various merchantable tree species are listed by species, age class, and forest inventory zone (Tables A1 - A33). A list and map showing British Columbia's forest inventory zones are shown in Table 1 and Figure 1, respectively. A list of the regression coefficients is given in Table 2.

APPLICATION

The tables can be used for:

1. estimating diameter outside bark at breast height (DBH); and
2. estimating radius (or diameter) inside bark at desired stump heights above point of germination.

For application (1), such as in stump cruising, the user would estimate DBH by entering the appropriate table showing measured stump diameter inside bark (DSIB) and stump height (SH) from point of germination. For DSIB and/or SH not shown in the tables, DBH would be estimated by linear interpolation.

For application (2), such as in logging waste measurement, the user would read the appropriate regression coefficients from Table 2 (or from the bottom of the appropriate tables) and apply them to the following formula:

$$RSIB_2 = \frac{RSIB_1\{1.0 + b_0(2.3-SH_1) + b_1 \ln[(SH_1 + 1.0)/2.3]\}}{1.0 + b_0(2.3-SH_2) + b_1 \ln[(SH_2 + 1.0)/2.3]}$$

where

$RSIB_2$ = radius inside bark at a desired stump height SH_2 (e.g., 30 cm) above point of germination (cm)

$RSIB_1$ = radius inside bark at a measured stump height (SH_1) above the point of germination (cm)

SH_2 = desired stump height above the point of germination (m)

SH_1 = measured stump height above the point of germination (m)

b_0, b_1 = regression coefficients (Table 2)

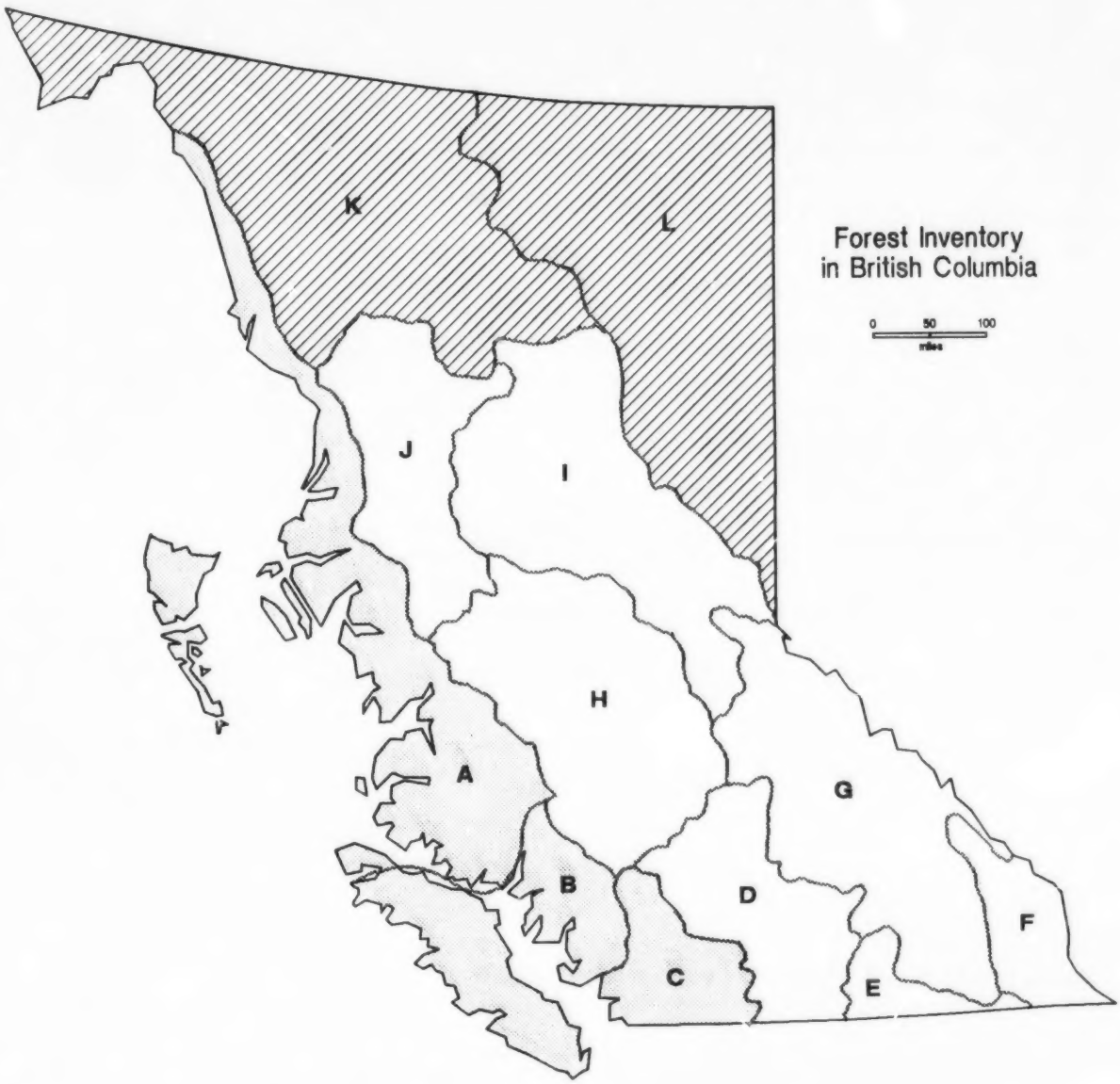
ln = natural logarithms

Note that no adjustment of the radius for bark thickness is required, as the above equation produces inside bark estimates directly.

APPENDIX 1. List of British Columbia's forest inventory zones

Zone	Description
A	North and Central Coast Region. Cedar - Hemlock type.
B	Southern Coast Region. Fir - Hemlock type.
C	South Coast Transition Belt. Hemlock - Fir - Balsam type.
D	South Western Interior Dry Belt. Fir - Lodgepole pine - Spruce type.
E	West Kootenay Region. Spruce - Balsam - Cedar - Fir type.
F	East Kootenay Region. Spruce - Lodgepole pine - Fir type.
G	Central Columbia Region, Interior Wet Belt. Spruce - Cedar - Hemlock - Fir type.
H	Nechako, Fraser Plateau Region. Lodgepole pine - Fir - Spruce type.
I	Central Interior Region. Lodgepole pine - Spruce - Balsam type.
J	North West Plateau Region, Stikine, Skeena. Hemlock - Balsam - Spruce type.
K	North Central Plateau Region, Cassiar, Omineca. Spruce - Balsam - Deciduous type.
L	North Eastern Plains Region. Spruce - Deciduous type.

APPENDIX 2. Map showing British Columbia's forest inventory zones



APPENDIX 3. Regression coefficients and standard errors

Species	Age[a]	Zone[b]	No. of Observations	b_0	b_1	SEE[c]
Douglas-fir	MAT.	ABC	2027	0.192451	0.656977	5.24
Douglas-fir	IMM.	ABC	1180	0.155107	0.564107	1.77
Douglas-fir	ALL	D-L	9978	0.189385	0.712098	3.62
Redcedar	MAT.	ABC	1988	0.032043	0.585026	5.70
Redcedar	IMM.	ABC	1297	0.055116	0.706639	2.98
Redcedar	ALL	D-L	4669	0.059052	0.655006	4.16
Hemlock	MAT.	ABC	4058	0.064571	0.534355	4.68
Hemlock	IMM.	ABC	2167	0.077996	0.438284	1.73
Hemlock	ALL	D-L	5466	0.100771	0.504787	2.94
Spruce	MAT.	ABC	1197	0.021123	0.530663	8.23
Spruce	IMM.	ABC	980	0.046301	0.580005	4.23
Spruce	ALL	D-J	13755	0.065728	0.575037	3.11
Spruce	ALL	KL	11494	0.062608	0.442810	1.46
Balsam	ALL	ABC	2548	0.057484	0.573054	4.84
Balsam	ALL	D-J	11760	0.073625	0.477491	2.02
Balsam	ALL	KL	2307	0.073358	0.431277	1.24
Yellow-cedar	ALL	A-L	905	0.037211	0.460492	2.03
White pine	ALL	ABC	275	0.057377	0.561538	3.32
White pine	ALL	D-L	774	0.056953	0.449184	1.76
Lodgepole pine	ALL	A-J	8318	0.056984	0.374589	1.23
Lodgepole pine	ALL	KL	5259	0.051075	0.337046	0.91
Yellow pine	ALL	A-L	2023	0.154163	0.638001	3.18
Larch	ALL	A-J	2520	0.190001	0.682016	4.06
Larch	ALL	KL	811	0.078977	0.532930	0.91
Cottonwood	ALL	A-J	996	0.117130	0.565108	3.91
Cottonwood	ALL	KL	2137	0.136074	0.498340	1.80
Alder	ALL	A-L	1556	0.055705	0.374983	1.34
Maple	ALL	A-L	416	0.064992	0.421552	0.72
Birch	ALL	A-J	923	0.070797	0.455765	1.60
Birch	ALL	KL	750	0.070901	0.407800	0.84
Aspen	ALL	A-J	2204	0.103886	0.492890	1.55
Aspen	ALL	KL	4100	0.097907	0.469721	1.50
Whitebark pine	ALL	A-L	148	0.036171	0.482541	1.66

[a]Age: IMM = immature, up to 120 years old, MAT = mature, more than 120 years old, ALL = all ages

[b]Zone: A = North and central coast region, B = Southern coast region, C = South coast transition belt, D = South western interior dry belt, E = West Kootenay region, F = East Kootenay region, G = central Columbia region, interior wet belt, H = Nechako, Fraser plateau region, I = Central interior, J = North west plateau region, Stikine, Skeena, K = North Central region, Cassiar, Omineca, L = North eastern plains region

[c]SEE = Standard error of estimated DBH, for all diameter classes (cm)

APPENDIX 4. Stump and breast height diameter tables

A 1	Immature Douglas-fir up to 120 years in forest inventory zones A, B, C.
A 2	Mature Douglas-fir over 120 years in forest inventory zones A, B, C.
A 3	Douglas-fir - All ages in forest inventory zones D to L.
A 4	Immature redcedar up to 120 years in forest inventory zones A, B. C.
A 5	Mature redcedar over 120 years in forest inventory zones A, B. C.
A 6	Western redcedar - All ages in forest inventory zones D to L.
A 7	Immature western hemlock up to 120 years in forest inventory zones A, B. C.
A 8	Mature western hemlock over 120 years in forest inventory zones A, B. C.
A 9	Western hemlock - All ages in forest inventory zones D to L.
A10	Balsam species - All ages in forest inventory zones A, B, C.
A11	Balsam species - All ages in forest inventory zones D to J.
A12	Balsam species - All ages in forest inventory zones K and L.
A13	Immature Sitka spruce up to 120 years in forest inventory zones A, B. C.
A14	Mature Sitka spruce up to 120 years in forest inventory zones A, B. C.
A15	Spruce species - All ages in forest inventory zones D to J.
A16	Spruce species - All ages in forest inventory zones K and L.
A17	Yellow-cedar - All ages in forest inventory zones A to L.
A18	Western white pine - All ages in forest inventory zones A, B, C.
A19	Western white pine - All ages in forest inventory zones D to L.
A20	Lodgepole pine - All ages in forest inventory zones A to J.
A21	Lodgepole pine - All ages in forest inventory zones K and L.
A22	Western yellow pine - All ages in forest inventory zones A to L.
A23	Western larch - All ages in forest inventory zones A to J.
A24	Western larch - All ages in forest inventory zones K and L.
A25	Black cottonwood - All ages in forest inventory zones A to J.
A26	Black cottonwood - All ages in forest inventory zones K and L.
A27	Red alder - All ages in forest inventory zones A to L.
A28	Broadleaf maple - All ages in forest inventory zones A to L.
A29	White birch species - All ages in forest inventory zones A to J.
A30	White birch species - All ages in forest inventory zones K and L.
A31	Trembling aspen - All ages in forest inventory zones A to J.
A32	Trembling aspen - All ages in forest inventory zones K and L.
A33	Whitebark pine - All ages in forest inventory zones A to J.

TABLE 1 **Stump and Breast Height Diameter Tables for: Immature Douglas-fir** up to 120 Years **in Forest Inventory Zones A,B,C**

Diameter Breast Height Outside Bark in cm							
DSIB	**Stump Height in m**						
(cm)	**0.15**	**0.30**	**0.45**	**0.60**	**0.75**	**0.90**	**1.05**
10	9.4	9.9	10.3	10.6	10.9	11.1	11.3
12	11.3	11.9	12.3	12.7	13.0	13.3	13.5
14	13.2	13.8	14.4	14.8	15.2	15.5	15.8
16	15.1	15.8	16.4	16.9	17.4	17.7	18.1
18	17.0	17.8	18.5	19.1	19.6	20.0	20.3
20	18.8	19.8	20.5	21.2	21.7	22.2	22.6
22	20.7	21.7	22.6	23.3	23.9	24.4	24.8
24	22.6	23.7	24.6	25.4	26.1	26.6	27.1
26	24.5	25.7	26.7	27.5	28.2	28.8	29.4
28	26.4	27.7	28.7	29.7	30.4	31.1	31.6
30	28.3	29.7	30.8	31.8	32.6	33.3	33.9
32	30.2	31.6	32.9	33.9	34.8	35.5	36.1
34	32.0	33.6	34.9	36.0	36.9	37.7	38.4
36	33.9	35.6	37.0	38.1	39.1	39.9	40.6
38	35.8	37.6	39.0	40.2	41.3	42.2	42.9
40	37.7	39.5	41.1	42.4	43.4	44.4	45.2
42	39.6	41.5	43.1	44.5	45.6	46.6	47.4
44	41.5	43.5	45.2	46.6	47.8	48.8	49.7
46	43.4	45.5	47.2	48.7	50.0	51.0	51.9
48	45.2	47.4	49.3	50.8	52.1	53.2	54.2
50	47.1	49.4	51.3	52.9	54.3	55.5	56.4
52	49.0	51.4	53.4	55.1	56.5	57.7	58.7
54	50.9	53.4	55.4	57.2	58.7	59.9	61.0
56	52.8	55.3	57.5	59.3	60.8	62.1	63.2
58	54.7	57.3	59.5	61.4	63.0	64.3	65.5
60	56.5	59.3	61.6	63.5	65.2	66.6	67.7
62	58.4	61.3	63.7	65.7	67.3	68.8	70.0
64	60.3	63.3	65.7	67.8	69.5	71.0	72.3
66	62.2	65.2	67.8	69.9	71.7	73.2	74.5
68	64.1	67.2	69.8	72.0	73.9	75.4	76.8
70	66.0	69.2	71.9	74.1	76.0	77.7	79.0
72	67.9	71.2	73.9	76.2	78.2	79.9	81.3
74	69.7	73.1	76.0	78.4	80.4	82.1	83.5
76	71.6	75.1	78.0	80.5	82.6	84.3	85.8
78	73.5	77.1	80.1	82.6	84.7	86.5	88.1

Equation Used:
DBH=DSIB+0.155107*DSIB*(2.3-SH)+0.564107*DSIB*Ln((SH+1.0)/2.3)
Based on 393 Trees. Standard Error of Estimated DBH = 1.77 cm

TABLE 1 (Continued)

Diameter Breast Height Outside Bark in cm							
DSIB	**Stump Height in m**						
(cm)	**0.15**	**0.30**	**0.45**	**0.60**	**0.75**	**0.90**	**1.05**
80	75.4	79.1	82.1	84.7	86.9	88.7	90.3
82	77.3	81.0	84.2	86.8	89.1	91.0	92.6
84	79.2	83.0	86.2	89.0	91.2	93.2	94.8
86	81.1	85.0	88.3	91.1	93.4	95.4	97.1
88	82.9	87.0	90.3	93.2	95.6	97.6	99.3
90	84.8	89.0	92.4	95.3	97.8	99.8	101.6
92	86.7	90.9	94.5	97.4	99.9	102.1	103.9
94	88.6	92.9	96.5	99.5	102.1	104.3	106.1
96	90.5	94.9	98.6	101.7	104.3	106.5	108.4
98	92.4	96.9	100.6	103.8	106.5	108.7	110.6
100	94.2	98.8	102.7	105.9	108.6	110.9	112.9
102	96.1	100.8	104.7	108.0	110.8	113.2	115.2
104	98.0	102.8	106.8	110.1	113.0	115.4	117.4
106	99.9	104.8	108.8	112.3	115.1	117.6	119.7
108	101.8	106.7	110.9	114.4	117.3	119.8	121.9
110	103.7	108.7	112.9	116.5	119.5	122.0	124.2
112	105.6	110.7	115.0	118.6	121.7	124.2	126.4
114	107.4	112.7	117.0	120.7	123.8	126.5	128.7
116	109.3	114.7	119.1	122.8	126.0	128.7	131.0
118	111.2	116.6	121.2	125.0	128.2	130.9	133.2
120	113.1	118.6	123.2	127.1	130.3	133.1	135.5
122	115.0	120.6	125.3	129.2	132.5	135.3	137.7
124	116.9	122.6	127.3	131.3	134.7	137.6	140.0
126	118.8	124.5	129.4	133.4	136.9	139.8	142.3
128	120.6	126.5	131.4	135.5	139.0	142.0	144.5
130	122.5	128.5	133.5	137.7	141.2	144.2	146.8
132	124.4	130.5	135.5	139.8	143.4	146.4	149.0
134	126.3	132.4	137.6	141.9	145.6	148.7	151.3
136	128.2	134.4	139.6	144.0	147.7	150.9	153.5
138	130.1	136.4	141.7	146.1	149.9	153.1	155.8
140	131.9	138.4	143.7	148.3	152.1	155.3	158.1
142	133.8	140.3	145.8	150.4	154.2	157.5	160.3
144	135.7	142.3	147.8	152.5	156.4	159.7	162.6
146	137.6	144.3	149.9	154.6	158.6	162.0	164.8
148	139.5	146.3	152.0	156.7	160.8	164.2	167.1

TABLE 1 (Concluded)

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	141.4	148.3	154.0	158.8	162.9	166.4	169.3
152	143.3	150.2	156.1	161.0	165.1	168.6	171.6
154	145.1	152.2	158.1	163.1	167.3	170.8	173.9
156	147.0	154.2	160.2	165.2	169.5	173.1	176.1
158	148.9	156.2	162.2	167.3	171.6	175.3	178.4
160	150.8	158.1	164.3	169.4	173.8	177.5	180.6
162	152.7	160.1	166.3	171.6	176.0	179.7	182.9
164	154.6	162.1	168.4	173.7	178.1	181.9	185.2
166	156.5	164.1	170.4	175.8	180.3	184.2	187.4
168	158.3	166.0	172.5	177.9	182.5	186.4	189.7
170	160.2	168.0	174.5	180.0	184.7	188.6	191.9
162	162.1	170.0	176.6	182.1	186.8	190.8	194.2
174	164.0	172.0	178.6	184.3	189.0	193.0	196.4
176	165.9	174.0	180.7	186.4	191.2	195.2	198.7
178	167.8	175.9	182.8	188.5	193.4	197.5	201.0
180	169.6	177.9	184.8	190.6	195.5	199.7	203.2
182	171.5	179.9	186.9	192.7	197.7	201.9	205.5
184	173.4	181.9	188.9	194.8	199.9	204.1	207.7
186	175.3	183.8	191.0	197.0	202.0	206.3	210.0
188	177.2	185.8	193.0	199.1	204.2	208.6	212.2
190	179.1	187.8	195.1	201.2	206.4	210.8	214.5
192	181.0	189.8	197.1	203.3	208.6	213.0	216.8
194	182.8	191.7	199.2	205.4	210.7	215.2	219.0
196	184.7	193.7	201.2	207.6	212.9	217.4	221.3
198	186.6	195.7	203.3	209.7	215.1	219.7	223.5
200	188.5	197.7	205.3	211.8	217.2	221.9	225.8
202	190.4	199.6	207.4	213.9	219.4	224.1	228.1
204	192.3	201.6	209.4	216.0	221.6	226.3	230.3
206	194.1	203.6	211.5	218.1	223.8	228.5	232.6
208	196.0	205.6	213.6	220.3	225.9	230.7	234.8
210	197.9	207.6	215.6	222.4	228.1	233.0	237.1
212	199.8	209.5	217.7	224.5	230.3	235.2	239.3
214	201.7	211.5	219.7	226.6	232.5	237.4	241.6
216	203.6	213.5	221.8	228.7	234.6	239.6	243.9
218	205.5	215.5	223.8	230.9	236.8	241.8	246.1

Equation Used:
DBH=DSIB+0.155107*DSIB*(2.3-SH)+0.564107*DSIB*Ln((SH+1.0)/2.3)
Based on 393 Trees. Standard Error of Estimated DBH = 1.77 cm

TABLE 2 **Stump and Breast Height Diameter Tables for: Mature Douglas-fir** over 120 Years **in Forest Inventory Zones A,B,C**

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	9.6	10.1	10.5	10.9	11.2	11.4	11.6
12	11.5	12.1	12.6	13.1	13.4	13.7	14.0
14	13.4	14.1	14.7	15.2	15.7	16.0	16.3
16	15.3	16.2	16.8	17.4	17.9	18.3	18.6
18	17.3	18.2	19.0	19.6	20.1	20.6	21.0
20	19.2	20.2	21.1	21.8	22.4	22.9	23.3
22	21.1	22.2	23.2	24.0	24.6	25.2	25.6
24	23.0	24.2	25.3	26.1	26.9	27.5	28.0
26	24.9	26.3	27.4	28.3	29.1	29.7	30.3
28	26.8	28.3	29.5	30.5	31.3	32.0	32.6
30	28.8	30.3	31.6	32.7	33.6	34.3	34.9
32	30.7	32.3	33.7	34.8	35.8	36.6	37.3
34	32.6	34.3	35.8	37.0	38.0	38.9	39.6
36	34.5	36.4	37.9	39.2	40.3	41.2	41.9
38	36.4	38.4	40.0	41.4	42.5	43.5	44.3
40	38.3	40.4	42.1	43.5	44.8	45.8	46.6
42	40.3	42.4	44.2	45.7	47.0	48.0	48.9
44	42.2	44.4	46.3	47.9	49.2	50.3	51.3
46	44.1	46.5	48.4	50.1	51.5	52.6	53.6
48	46.0	48.5	50.5	52.3	53.7	54.9	55.9
50	47.9	50.5	52.6	54.4	55.9	57.2	58.2
52	49.8	52.5	54.8	56.6	58.2	59.5	60.6
54	51.8	54.5	56.9	58.8	60.4	61.8	62.9
56	53.7	56.6	59.0	61.0	62.7	64.1	65.2
58	55.6	58.6	61.1	63.1	64.9	66.3	67.6
60	57.5	60.6	63.2	65.3	67.1	68.6	69.9
62	59.4	62.6	65.3	67.5	69.4	70.9	72.2
64	61.3	64.6	67.4	69.7	71.6	73.2	74.6
66	63.3	66.7	69.5	71.9	73.8	75.5	76.9
68	65.2	68.7	71.6	74.0	76.1	77.8	79.2
70	67.1	70.7	73.7	76.2	78.3	80.1	81.5
72	69.0	72.7	75.8	78.4	80.6	82.4	83.9
74	70.9	74.7	77.9	80.6	82.8	84.6	86.2
76	72.8	76.8	80.0	82.7	85.0	86.9	88.5
78	74.8	78.8	82.1	84.9	87.3	89.2	90.9

Equation Used:
DBH=DSIB+0.192451*DSIB*(2.3-SH)+0.656977*DSIB*Ln((SH+1.0)/2.3)
Based on 603 Trees. Standard Error of Estimated DBH = 5.24 cm

TABLE 2 (Continued)

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	76.7	80.8	84.2	87.1	89.5	91.5	93.2
82	78.6	82.8	86.3	89.3	91.7	93.8	95.5
84	80.5	84.8	88.4	91.5	94.0	96.1	97.9
86	82.4	86.9	90.6	93.6	96.2	98.4	100.2
88	84.3	88.9	92.7	95.8	98.5	100.7	102.5
90	86.3	90.9	94.8	98.0	100.7	103.0	104.8
92	88.2	92.9	96.9	100.2	102.9	105.2	107.2
94	90.1	94.9	99.0	102.3	105.2	107.5	109.5
96	92.0	97.0	101.1	104.5	107.4	109.8	111.8
98	93.9	99.0	103.2	106.7	109.6	112.1	114.2
100	95.8	101.0	105.3	108.9	111.9	114.4	116.5
102	97.8	103.0	107.4	111.1	114.1	116.7	118.8
104	99.7	105.0	109.5	113.2	116.4	119.0	121.2
106	101.6	107.1	111.6	115.4	118.6	121.3	123.5
108	103.5	109.1	113.7	117.6	120.8	123.5	125.8
110	105.4	111.1	115.8	119.8	123.1	125.8	128.1
112	107.3	113.1	117.9	121.9	125.3	128.1	130.5
114	109.3	115.1	120.0	124.1	127.5	130.4	132.8
116	111.2	117.2	122.1	126.3	129.8	132.7	135.1
118	113.1	119.2	124.2	128.5	132.0	135.0	137.5
120	115.0	121.2	126.4	130.6	134.3	137.3	139.8
122	116.9	123.2	128.5	132.8	136.5	139.6	142.1
124	118.8	125.2	130.6	135.0	138.7	141.8	144.5
126	120.8	127.3	132.7	137.2	141.0	144.1	146.8
128	122.7	129.3	134.8	139.4	143.2	146.4	149.1
130	124.6	131.3	136.9	141.5	145.4	148.7	151.4
132	126.5	133.3	139.0	143.7	147.7	151.0	153.8
134	128.4	135.3	141.1	145.9	149.9	153.3	156.1
136	130.3	137.4	143.2	148.1	152.2	155.6	158.4
138	132.3	139.4	145.3	150.2	154.4	157.9	160.8
140	134.2	141.4	147.4	152.4	156.6	160.1	163.1
142	136.1	143.4	149.5	154.6	158.9	162.4	165.4
144	138.0	145.4	151.6	156.8	161.1	164.7	167.8
146	139.9	147.5	153.7	159.0	163.3	167.0	170.1
148	141.8	149.5	155.8	161.1	165.6	169.3	172.4

TABLE 2 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	143.8	151.5	157.9	163.3	167.8	171.6	174.7
152	145.7	153.5	160.0	165.5	170.1	173.9	177.1
154	147.6	155.6	162.2	167.7	172.3	176.2	179.4
156	149.5	157.6	164.3	169.8	174.5	178.5	181.7
158	151.4	159.6	166.4	172.0	176.8	180.7	184.1
160	153.3	161.6	168.5	174.2	179.0	183.0	186.4
162	155.3	163.6	170.6	176.4	181.2	185.3	188.7
164	157.2	165.7	172.7	178.6	183.5	187.6	191.1
166	159.1	167.7	174.8	180.7	185.7	189.9	193.4
168	161.0	169.7	176.9	182.9	188.0	192.2	195.7
170	162.9	171.7	179.0	185.1	190.2	194.5	198.0
172	164.8	173.7	181.1	187.3	192.4	196.8	200.4
174	166.8	175.8	183.2	189.4	194.7	199.0	202.7
176	168.7	177.8	185.3	191.6	196.9	201.3	205.0
178	170.6	179.8	187.4	193.8	199.1	203.6	207.4
180	172.5	181.8	189.5	196.0	201.4	205.9	209.7
182	174.4	183.8	191.6	198.2	203.6	208.2	212.0
184	176.3	185.9	193.7	200.3	205.9	210.5	214.4
186	178.3	187.9	195.8	202.5	208.1	212.8	216.7
188	180.2	189.9	198.0	204.7	210.3	215.1	219.0
190	182.1	191.9	200.1	206.9	212.6	217.3	221.3
192	184.0	193.9	202.2	209.0	214.8	219.6	223.7
194	185.9	196.0	204.3	211.2	217.0	221.9	226.0
196	187.8	198.0	206.4	213.4	219.3	224.2	228.3
198	189.8	200.0	208.5	215.6	221.5	226.5	230.7
200	191.7	202.0	210.6	217.7	223.8	228.8	233.0
202	193.6	204.0	212.7	219.9	226.0	231.1	235.3
204	195.5	206.1	214.8	222.1	228.2	233.4	237.7
206	197.4	208.1	216.9	224.3	230.5	235.6	240.0
208	199.3	210.1	219.0	226.5	232.7	237.9	242.3
210	201.3	212.1	221.1	228.6	234.9	240.2	244.6
212	203.2	214.1	223.2	230.8	237.2	242.5	247.0
214	205.1	216.2	225.3	233.0	239.4	244.8	249.3
216	207.0	218.2	227.4	235.2	241.7	247.1	251.6
218	208.9	220.2	229.5	237.3	243.9	249.4	254.0

Equation Used:
DBH=DSIB+0.192451*DSIB*(2.3-SH)+0.656977*DSIB*Ln((SH+1.0)/2.3)
Based on 603 Trees. Standard Error of Estimated DBH = 5.24 cm

TABLE 2 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
220	210.8	222.2	231.6	239.5	246.1	251.7	256.3
222	212.8	224.2	233.8	241.7	248.4	253.9	258.6
224	214.7	226.3	235.9	243.9	250.6	256.2	261.0
226	216.6	228.3	238.0	246.1	252.8	258.5	263.3
228	218.5	230.3	240.1	248.2	255.1	260.8	265.6
230	220.4	232.3	242.2	250.4	257.3	263.1	267.9
232	222.3	234.3	244.3	252.6	259.6	265.4	270.3
234	224.3	236.4	246.4	254.8	261.8	267.7	272.6
236	226.2	238.4	248.5	256.9	264.0	270.0	274.9
238	228.1	240.4	250.6	259.1	266.3	272.3	277.3
240	230.0	242.4	252.7	261.3	268.5	274.5	279.6
242	231.9	244.4	254.8	263.5	270.7	276.8	281.9
244	233.8	246.5	256.9	265.7	273.0	279.1	284.3
246	235.8	248.5	259.0	267.8	275.2	281.4	286.6
248	237.7	250.5	261.1	270.0	277.5	283.7	288.9
250	239.6	252.5	263.2	272.2	279.7	286.0	291.2
252	241.5	254.5	265.3	274.4	281.9	288.3	293.6
254	243.4	256.6	267.4	276.5	284.2	290.6	295.9
256	245.3	258.6	269.6	278.7	286.4	292.8	298.2
258	247.3	260.6	271.7	280.9	288.6	295.1	300.6
260	249.2	262.6	273.8	283.1	290.9	297.4	302.9
262	251.1	264.6	275.9	285.3	293.1	299.7	305.2
264	253.0	266.7	278.0	287.4	295.4	302.0	307.6
266	254.9	268.7	280.1	289.6	297.6	304.3	309.9
268	256.8	270.7	282.2	291.8	299.8	306.6	312.2
270	258.8	272.7	284.3	294.0	302.1	308.9	314.5
272	260.7	274.7	286.4	296.1	304.3	311.1	316.9
274	262.6	276.8	288.5	298.3	306.5	313.4	319.2
276	264.5	278.8	290.6	300.5	308.8	315.7	321.5
278	266.4	280.8	292.7	302.7	311.0	318.0	323.9
280	268.3	282.8	294.8	304.8	313.3	320.3	326.2
282	270.3	284.8	296.9	307.0	315.5	322.6	328.5
284	272.2	286.9	299.0	309.2	317.7	324.9	330.9
286	274.1	288.9	301.1	311.4	320.0	327.2	333.2
288	276.0	290.9	303.2	313.6	322.2	329.4	335.5

TABLE 2 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
290	277.9	292.9	305.4	315.7	324.4	331.7	337.8
292	279.8	294.9	307.5	317.9	326.7	334.0	340.2
294	281.8	297.0	309.6	320.1	328.9	336.3	342.5
296	283.7	299.0	311.7	322.3	331.2	338.6	344.8
298	285.6	301.0	313.8	324.4	333.4	340.9	347.2
300	287.5	303.0	315.9	326.6	335.6	343.2	349.5
302	289.4	305.0	318.0	328.8	337.9	345.5	351.8
304	291.3	307.1	320.1	331.0	340.1	347.7	354.1
306	293.3	309.1	322.2	333.2	342.3	350.0	356.5
308	295.2	311.1	324.3	335.3	344.6	352.3	358.8
310	297.1	313.1	326.4	337.5	346.8	354.6	361.1
312	299.0	315.1	328.5	339.7	349.1	356.9	363.5
314	300.9	317.2	330.6	341.9	351.3	359.2	365.8
316	302.9	319.2	332.7	344.0	353.5	361.5	368.1
318	304.8	321.2	334.8	346.2	355.8	363.8	370.5
320	306.7	323.2	336.9	348.4	358.0	366.1	372.8
322	308.6	325.2	339.0	350.6	360.2	368.3	375.1
324	310.5	327.3	341.2	352.8	362.5	370.6	377.4
326	312.4	329.3	343.3	354.9	364.7	372.9	379.8
328	314.4	331.3	345.4	357.1	367.0	375.2	382.1
330	316.3	333.3	347.5	359.3	369.2	377.5	384.4
332	318.2	335.3	349.6	361.5	371.4	379.8	386.8
334	320.1	337.4	351.7	363.6	373.7	382.1	389.1
336	322.0	339.4	353.8	365.8	375.9	384.4	391.4
338	323.9	341.4	355.9	368.0	378.1	386.6	393.8
340	325.9	343.4	358.0	370.2	380.4	388.9	396.1
342	327.8	345.4	360.1	372.4	382.6	391.2	398.4
344	329.7	347.5	362.2	374.5	384.9	393.5	400.7
346	331.6	349.5	364.3	376.7	387.1	395.8	403.1
348	333.5	351.5	366.4	378.9	389.3	398.1	405.4
350	335.4	353.5	368.5	381.1	391.6	400.4	407.7
352	337.4	355.5	370.6	383.2	393.8	402.7	410.1
354	339.3	357.6	372.7	385.4	396.0	404.9	412.4
356	341.2	359.6	374.8	387.6	398.3	407.2	414.7
358	343.1	361.6	377.0	389.8	400.5	409.5	417.1

Equation Used:
DBH=DSIB+0.192451*DSIB*(2.3-SH)+0.656977*DSIB*Ln((SH+1.0)/2.3)
Based on 603 Trees. Standard Error of Estimated DBH = 5.24 cm

TABLE 3 **Stump and Breast Height Diameter Tables for: Douglas-fir all ages in Forest Inventory Zones D to L**

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	9.1	9.7	10.2	10.6	11.0	11.3	11.5
12	11.0	11.7	12.3	12.8	13.2	13.5	13.9
14	12.8	13.6	14.3	14.9	15.4	15.8	16.2
16	14.6	15.6	16.3	17.0	17.6	18.1	18.5
18	16.4	17.5	18.4	19.1	19.8	20.3	20.8
20	18.3	19.4	20.4	21.3	22.0	22.6	23.1
22	20.1	21.4	22.5	23.4	24.2	24.8	25.4
24	21.9	23.3	24.5	25.5	26.4	27.1	27.7
26	23.8	25.3	26.6	27.7	28.6	29.4	30.0
28	25.6	27.2	28.6	29.8	30.8	31.6	32.3
30	27.4	29.2	30.7	31.9	33.0	33.9	34.6
32	29.2	31.1	32.7	34.0	35.2	36.1	37.0
34	31.1	33.1	34.7	36.2	37.4	38.4	39.3
36	32.9	35.0	36.8	38.3	39.6	40.6	41.6
38	34.7	37.0	38.8	40.4	41.8	42.9	43.9
40	36.5	38.9	40.9	42.5	44.0	45.2	46.2
42	38.4	40.8	42.9	44.7	46.2	47.4	48.5
44	40.2	42.8	45.0	46.8	48.4	49.7	50.8
46	42.0	44.7	47.0	48.9	50.6	51.9	53.1
48	43.9	46.7	49.0	51.0	52.7	54.2	55.4
50	45.7	48.6	51.1	53.2	54.9	56.5	57.7
52	47.5	50.6	53.1	55.3	57.1	58.7	60.0
54	49.3	52.5	55.2	57.4	59.3	61.0	62.4
56	51.2	54.5	57.2	59.6	61.5	63.2	64.7
58	53.0	56.4	59.3	61.7	63.7	65.5	67.0
60	54.8	58.3	61.3	63.8	65.9	67.7	69.3
62	56.6	60.3	63.4	65.9	68.1	70.0	71.6
64	58.5	62.2	65.4	68.1	70.3	72.3	73.9
66	60.3	64.2	67.4	70.2	72.5	74.5	76.2
68	62.1	66.1	69.5	72.3	74.7	76.8	78.5
70	64.0	68.1	71.5	74.4	76.9	79.0	80.8
72	65.8	70.0	73.6	76.6	79.1	81.3	83.1
74	67.6	72.0	75.6	78.7	81.3	83.6	85.5
76	69.4	73.9	77.7	80.8	83.5	85.8	87.8
78	71.3	75.9	79.7	83.0	85.7	88.1	90.1

Equation Used:
DBH=DSIB+0.189385*DSIB*(2.3-SH)+0.712098*DSIB*Ln((SH+1.0)/2.3)
Based on 3237 Trees. Standard Error of Estimated DBH = 3.62 cm

TABLE 3 (Continued)

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	73.1	77.8	81.7	85.1	87.9	90.3	92.4
82	74.9	79.7	83.8	87.2	90.1	92.6	94.7
84	76.7	81.7	85.8	89.3	92.3	94.8	97.0
86	78.6	83.6	87.9	91.5	94.5	97.1	99.3
88	80.4	85.6	89.9	93.6	96.7	99.4	101.6
90	82.2	87.5	92.0	95.7	98.9	101.6	103.9
92	84.1	89.5	94.0	97.8	101.1	103.9	106.2
94	85.9	91.4	96.1	100.0	103.3	106.1	108.6
96	87.7	93.4	98.1	102.1	105.5	108.4	110.9
98	89.5	95.3	100.1	104.2	107.7	110.7	113.2
100	91.4	97.2	102.2	106.4	109.9	112.9	115.5
102	93.2	99.2	104.2	108.5	112.1	115.2	117.8
104	95.0	101.1	106.3	110.6	114.3	117.4	120.1
106	96.8	103.1	108.3	112.7	116.5	119.7	122.4
108	98.7	105.0	110.4	114.9	118.7	121.9	124.7
110	100.5	107.0	112.4	117.0	120.9	124.2	127.0
112	102.3	108.9	114.4	119.1	123.1	126.5	129.3
114	104.1	110.9	116.5	121.2	125.3	128.7	131.6
116	106.0	112.8	118.5	123.4	127.5	131.0	134.0
118	107.8	114.8	120.6	125.5	129.7	133.2	136.3
120	109.6	116.7	122.6	127.6	131.9	135.5	138.6
122	111.5	118.6	124.7	129.8	134.1	137.7	140.9
124	113.3	120.6	126.7	131.9	136.3	140.0	143.2
126	115.1	122.5	128.8	134.0	138.5	142.3	145.5
128	116.9	124.5	130.8	136.1	140.7	144.5	147.8
130	118.8	126.4	132.8	138.3	142.9	146.8	150.1
132	120.6	128.4	134.9	140.4	145.1	149.0	152.4
134	122.4	130.3	136.9	142.5	147.3	151.3	154.7
136	124.2	132.3	139.0	144.6	149.5	153.6	157.1
138	126.1	134.2	141.0	146.8	151.7	155.8	159.4
140	127.9	136.1	143.1	148.9	153.9	158.1	161.7
142	129.7	138.1	145.1	151.0	156.0	160.3	164.0
144	131.6	140.0	147.1	153.1	158.2	162.6	166.3
146	133.4	142.0	149.2	155.3	160.4	164.8	168.6
148	135.2	143.9	151.2	157.4	162.6	167.1	170.9

TABLE 3 (Concluded)

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	137.0	145.9	153.3	159.5	164.8	169.4	173.2
152	138.9	147.8	155.3	161.7	167.0	171.6	175.5
154	140.7	149.8	157.4	163.8	169.2	173.9	177.8
156	142.5	151.7	159.4	165.9	171.4	176.1	180.1
158	144.3	153.7	161.5	168.0	173.6	178.4	182.5
160	146.2	155.6	163.5	170.2	175.8	180.7	184.8
162	148.0	157.5	165.5	172.3	178.0	182.9	187.1
164	149.8	159.5	167.6	174.4	180.2	185.2	189.4
166	151.7	161.4	169.6	176.5	182.4	187.4	191.7
168	153.5	163.4	171.7	178.7	184.6	189.7	194.0
170	155.3	165.3	173.7	180.8	186.8	191.9	196.3
172	157.1	167.3	175.8	182.9	189.0	194.2	198.6
174	159.0	169.2	177.8	185.1	191.2	196.5	200.9
176	160.8	171.2	179.8	187.2	193.4	198.7	203.2
178	162.6	173.1	181.9	189.3	195.6	201.0	205.6
180	164.4	175.0	183.9	191.4	197.8	203.2	207.9
182	166.3	177.0	186.0	193.6	200.0	205.5	210.2
184	168.1	178.9	188.0	195.7	202.2	207.8	212.5
186	169.9	180.9	190.1	197.8	204.4	210.0	214.8
188	171.8	182.8	192.1	199.9	206.6	212.3	217.1
190	173.6	184.8	194.1	202.1	208.8	214.5	219.4
192	175.4	186.7	196.2	204.2	211.0	216.8	221.7
194	177.2	188.7	198.2	206.3	213.2	219.0	224.0
196	179.1	190.6	200.3	208.5	215.4	221.3	226.3
198	180.9	192.6	202.3	210.6	217.6	223.6	228.6
200	182.7	194.5	204.4	212.7	219.8	225.8	231.0
202	184.5	196.4	206.4	214.8	222.0	228.1	233.3
204	186.4	198.4	208.5	217.0	224.2	230.3	235.6
206	188.2	200.3	210.5	219.1	226.4	232.6	237.9
208	190.0	202.3	212.5	221.2	228.6	234.9	240.2
210	191.9	204.2	214.6	223.3	230.8	237.1	242.5
212	193.7	206.2	216.6	225.5	233.0	239.4	244.8
214	195.5	208.1	218.7	227.6	235.2	241.6	247.1
216	197.3	210.1	220.7	229.7	237.4	243.9	249.4
218	199.2	212.0	222.8	231.8	239.6	246.1	251.7

Equation Used:
DBH=DSIB+0.189385*DSIB*(2.3-SH)+0.712098*DSIB*Ln((SH+1.0)/2.3)
Based on 3237 Trees. Standard Error of Estimated DBH = 3.62 cm

TABLE 4 **Stump and Breast Height Diameter Tables for: Immature Redcedar** up to 120 Years in **Forest Inventory Zones A,B,C**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	6.3	7.1	7.8	8.4	8.9	9.4	9.9
12	7.5	8.5	9.3	10.0	10.7	11.3	11.9
14	8.8	9.9	10.9	11.7	12.5	13.2	13.8
16	10.1	11.3	12.4	13.4	14.3	15.1	15.8
18	11.3	12.7	14.0	15.1	16.1	17.0	17.8
20	12.6	14.1	15.5	16.7	17.8	18.8	19.8
22	13.8	15.6	17.1	18.4	19.6	20.7	21.7
24	15.1	17.0	18.6	20.1	21.4	22.6	23.7
26	16.3	18.4	20.2	21.8	23.2	24.5	25.7
28	17.6	19.8	21.7	23.4	25.0	26.4	27.7
30	18.9	21.2	23.3	25.1	26.8	28.3	29.6
32	20.1	22.6	24.8	26.8	28.6	30.1	31.6
34	21.4	24.0	26.4	28.5	30.3	32.0	33.6
36	22.6	25.5	27.9	30.1	32.1	33.9	35.6
38	23.9	26.9	29.5	31.8	33.9	35.8	37.5
40	25.1	28.3	31.0	33.5	35.7	37.7	39.5
42	26.4	29.7	32.6	35.2	37.5	39.6	41.5
44	27.7	31.1	34.1	36.8	39.3	41.5	43.5
46	28.9	32.5	35.7	38.5	41.0	43.3	45.4
48	30.2	33.9	37.2	40.2	42.8	45.2	47.4
50	31.4	35.4	38.8	41.9	44.6	47.1	49.4
52	32.7	36.8	40.3	43.5	46.4	49.0	51.4
54	33.9	38.2	41.9	45.2	48.2	50.9	53.3
56	35.2	39.6	43.5	46.9	50.0	52.8	55.3
58	36.5	41.0	45.0	48.6	51.8	54.6	57.3
60	37.7	42.4	46.6	50.2	53.5	56.5	59.3
62	39.0	43.8	48.1	51.9	55.3	58.4	61.2
64	40.2	45.3	49.7	53.6	57.1	60.3	63.2
66	41.5	46.7	51.2	55.3	58.9	62.2	65.2
68	42.8	48.1	52.8	56.9	60.7	64.1	67.2
70	44.0	49.5	54.3	58.6	62.5	66.0	69.1
72	45.3	50.9	55.9	60.3	64.2	67.8	71.1
74	46.5	52.3	57.4	62.0	66.0	69.7	73.1
76	47.8	53.7	59.0	63.6	67.8	71.6	75.1
78	49.0	55.2	60.5	65.3	69.6	73.5	77.0

Equation Used:
DBH=DSIB+0.055116*DSIB*(2.3-SH)+0.706639*DSIB*Ln((SH+1.0)/2.3)
Based on 438 Trees. Standard Error of Estimated DBH = 2.98 cm

TABLE 4 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	50.3	56.6	62.1	67.0	71.4	75.4	79.0
82	51.6	58.0	63.6	68.7	73.2	77.3	81.0
84	52.8	59.4	65.2	70.3	75.0	79.1	83.0
86	54.1	60.8	66.7	72.0	76.7	81.0	84.9
88	55.3	62.2	68.3	73.7	78.5	82.9	86.9
90	56.6	63.6	69.8	75.4	80.3	84.8	88.9
92	57.8	65.0	71.4	77.0	82.1	86.7	90.9
94	59.1	66.5	72.9	78.7	83.9	88.6	92.8
96	60.4	67.9	74.5	80.4	85.7	90.4	94.8
98	61.6	69.3	76.0	82.1	87.4	92.3	96.8
100	62.9	70.7	77.6	83.7	89.2	94.2	98.8
102	64.1	72.1	79.1	85.4	91.0	96.1	100.7
104	65.4	73.5	80.7	87.1	92.8	98.0	102.7
106	66.6	74.9	82.3	88.7	94.6	99.9	104.7
108	67.9	76.4	83.8	90.4	96.4	101.8	106.7
110	69.2	77.8	85.4	92.1	98.2	103.6	108.6
112	70.4	79.2	86.9	93.8	99.9	105.5	110.6
114	71.7	80.6	88.5	95.4	101.7	107.4	112.6
116	72.9	82.0	90.0	97.1	103.5	109.3	114.6
118	74.2	83.4	91.6	98.8	105.3	111.2	116.5
120	75.4	84.8	93.1	100.5	107.1	113.1	118.5
122	76.7	86.3	94.7	102.1	108.9	114.9	120.5
124	78.0	87.7	96.2	103.8	110.6	116.8	122.5
126	79.2	89.1	97.8	105.5	112.4	118.7	124.4
128	80.5	90.5	99.3	107.2	114.2	120.6	126.4
130	81.7	91.9	100.9	108.8	116.0	122.5	128.4
132	83.0	93.3	102.4	110.5	117.8	124.4	130.4
134	84.2	94.7	104.0	112.2	119.6	126.2	132.3
136	85.5	96.2	105.5	113.9	121.4	128.1	134.3
138	86.8	97.6	107.1	115.5	123.1	130.0	136.3
140	88.0	99.0	108.6	117.2	124.9	131.9	138.3
142	89.3	100.4	110.2	118.9	126.7	133.8	140.2
144	90.5	101.8	111.7	120.6	128.5	135.7	142.2
146	91.8	103.2	113.3	122.2	130.3	137.6	144.2
148	93.0	104.6	114.8	123.9	132.1	139.4	146.2

TABLE 4 (Concluded)

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	94.3	106.1	116.4	125.6	133.8	141.3	148.1
152	95.6	107.5	117.9	127.3	135.6	143.2	150.1
154	96.8	108.9	119.5	128.9	137.4	145.1	152.1
156	98.1	110.3	121.0	130.6	139.2	147.0	154.1
158	99.3	111.7	122.6	132.3	141.0	148.9	156.0
160	100.6	113.1	124.2	134.0	142.8	150.7	158.0
162	101.8	114.5	125.7	135.6	144.6	152.6	160.0
164	103.1	116.0	127.3	137.3	146.3	154.5	162.0
166	104.4	117.4	128.8	139.0	148.1	156.4	163.9
168	105.6	118.8	130.4	140.7	149.9	158.3	165.9
170	106.9	120.2	131.9	142.3	151.7	160.2	167.9
172	108.1	121.6	133.5	144.0	153.5	162.1	169.9
174	109.4	123.0	135.0	145.7	155.3	163.9	171.8
176	110.7	124.4	136.6	147.4	157.0	165.8	173.8
178	111.9	125.9	138.1	149.0	158.8	167.7	175.8
180	113.2	127.3	139.7	150.7	160.6	169.6	177.8
182	114.4	128.7	141.2	152.4	162.4	171.5	179.7
184	115.7	130.1	142.8	154.1	164.2	173.4	181.7
186	116.9	131.5	144.3	155.7	166.0	175.2	183.7
188	118.2	132.9	145.9	157.4	167.8	177.1	185.7
190	119.5	134.3	147.4	159.1	169.5	179.0	187.6
192	120.7	135.8	149.0	160.8	171.3	180.9	189.6
194	122.0	137.2	150.5	162.4	173.1	182.8	191.6
196	123.2	138.6	152.1	164.1	174.9	184.7	193.6
198	124.5	140.0	153.6	165.8	176.7	186.5	195.5
200	125.7	141.4	155.2	167.5	178.5	188.4	197.5
202	127.0	142.8	156.7	169.1	180.2	190.3	199.5
204	128.3	144.2	158.3	170.8	182.0	192.2	201.5
206	129.5	145.7	159.8	172.5	183.8	194.1	203.4
208	130.8	147.1	161.4	174.1	185.6	196.0	205.4
210	132.0	148.5	163.0	175.8	187.4	197.9	207.4
212	133.3	149.9	164.5	177.5	189.2	199.7	209.4
214	134.5	151.3	166.1	179.2	191.0	201.6	211.3
216	135.8	152.7	167.6	180.8	192.7	203.5	213.3
218	137.1	154.1	169.2	182.5	194.5	205.4	215.3

Equation Used:
DBH=DSIB+0.055116*DSIB*(2.3-SH)+0.706639*DSIB*Ln((SH+1.0)/2.3)
Based on 438 Trees. Standard Error of Estimated DBH = 2.98 cm

TABLE 5 **Stump and Breast Height Diameter Tables for: Mature Redcedar** over 120 Years **in Forest Inventory Zones A,B,C**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	6.6	7.3	7.9	8.4	8.9	9.3	9.7
12	8.0	8.8	9.5	10.1	10.7	11.2	11.7
14	9.3	10.2	11.1	11.8	12.5	13.1	13.6
16	10.6	11.7	12.6	13.5	14.2	14.9	15.6
18	11.9	13.1	14.2	15.2	16.0	16.8	17.5
20	13.3	14.6	15.8	16.8	17.8	18.7	19.5
22	14.6	16.1	17.4	18.5	19.6	20.5	21.4
24	15.9	17.5	18.9	20.2	21.4	22.4	23.3
26	17.2	19.0	20.5	21.9	23.1	24.3	25.3
28	18.6	20.4	22.1	23.6	24.9	26.1	27.2
30	19.9	21.9	23.7	25.3	26.7	28.0	29.2
32	21.2	23.4	25.3	26.9	28.5	29.9	31.1
34	22.6	24.8	26.8	28.6	30.3	31.7	33.1
36	23.9	26.3	28.4	30.3	32.0	33.6	35.0
38	25.2	27.8	30.0	32.0	33.8	35.5	37.0
40	26.5	29.2	31.6	33.7	35.6	37.3	38.9
42	27.9	30.7	33.2	35.4	37.4	39.2	40.9
44	29.2	32.1	34.7	37.1	39.2	41.1	42.8
46	30.5	33.6	36.3	38.7	40.9	42.9	44.7
48	31.8	35.1	37.9	40.4	42.7	44.8	46.7
50	33.2	36.5	39.5	42.1	44.5	46.7	48.6
52	34.5	38.0	41.0	43.8	46.3	48.5	50.6
54	35.8	39.4	42.6	45.5	48.0	50.4	52.5
56	37.1	40.9	44.2	47.2	49.8	52.3	54.5
58	38.5	42.4	45.8	48.8	51.6	54.1	56.4
60	39.8	43.8	47.4	50.5	53.4	56.0	58.4
62	41.1	45.3	48.9	52.2	55.2	57.9	60.3
64	42.5	46.7	50.5	53.9	56.9	59.7	62.3
66	43.8	48.2	52.1	55.6	58.7	61.6	64.2
68	45.1	49.7	53.7	57.3	60.5	63.4	66.1
70	46.4	51.1	55.3	59.0	62.3	65.3	68.1
72	47.8	52.6	56.8	60.6	64.1	67.2	70.0
74	49.1	54.0	58.4	62.3	65.8	69.0	72.0
76	50.4	55.5	60.0	64.0	67.6	70.9	73.9
78	51.7	57.0	61.6	65.7	69.4	72.8	75.9

Equation Used:
DBH=DSIB+0.032043*DSIB*(2.3-SH)+0.585026*DSIB*Ln((SH+1.0)/2.3)
Based on 652 Trees. Standard Error of Estimated DBH = 5.70 cm

TABLE 5 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	53.1	58.4	63.2	67.4	71.2	74.6	77.8
82	54.4	59.9	64.7	69.1	73.0	76.5	79.8
84	55.7	61.3	66.3	70.7	74.7	78.4	81.7
86	57.1	62.8	67.9	72.4	76.5	80.2	83.7
88	58.4	64.3	69.5	74.1	78.3	82.1	85.6
90	59.7	65.7	71.0	75.8	80.1	84.0	87.5
92	61.0	67.2	72.6	77.5	81.9	85.8	89.5
94	62.4	68.6	74.2	79.2	83.6	87.7	91.4
96	63.7	70.1	75.8	80.8	85.4	89.6	93.4
98	65.0	71.6	77.4	82.5	87.2	91.4	95.3
100	66.3	73.0	78.9	84.2	89.0	93.3	97.3
102	67.7	74.5	80.5	85.9	90.8	95.2	99.2
104	69.0	76.0	82.1	87.6	92.5	97.0	101.2
106	70.3	77.4	83.7	89.3	94.3	98.9	103.1
108	71.6	78.9	85.3	91.0	96.1	100.8	105.1
110	73.0	80.3	86.8	92.6	97.9	102.6	107.0
112	74.3	81.8	88.4	94.3	99.7	104.5	108.9
114	75.6	83.3	90.0	96.0	101.4	106.4	110.9
116	77.0	84.7	91.6	97.7	103.2	108.2	112.8
118	78.3	86.2	93.1	99.4	105.0	110.1	114.8
120	79.6	87.6	94.7	101.1	106.8	112.0	116.7
122	80.9	89.1	96.3	102.7	108.6	113.8	118.7
124	82.3	90.6	97.9	104.4	110.3	115.7	120.6
126	83.6	92.0	99.5	106.1	112.1	117.6	122.6
128	84.9	93.5	101.0	107.8	113.9	119.4	124.5
130	86.2	94.9	102.6	109.5	115.7	121.3	126.5
132	87.6	96.4	104.2	111.2	117.5	123.2	128.4
134	88.9	97.9	105.8	112.8	119.2	125.0	130.3
136	90.2	99.3	107.4	114.5	121.0	126.9	132.3
138	91.5	100.8	108.9	116.2	122.8	128.8	134.2
140	92.9	102.2	110.5	117.9	124.6	130.6	136.2
142	94.2	103.7	112.1	119.6	126.3	132.5	138.1
144	95.5	105.2	113.7	121.3	128.1	134.4	140.1
146	96.9	106.6	115.2	123.0	129.9	136.2	142.0
148	98.2	108.1	116.8	124.6	131.7	138.1	144.0

TABLE 5 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	99.5	109.5	118.4	126.3	133.5	140.0	145.9
152	100.8	111.0	120.0	128.0	135.2	141.8	147.9
154	102.2	112.5	121.6	129.7	137.0	143.7	149.8
156	103.5	113.9	123.1	131.4	138.8	145.6	151.7
158	104.8	115.4	124.7	133.1	140.6	147.4	153.7
160	106.1	116.8	126.3	134.7	142.4	149.3	155.6
162	107.5	118.3	127.9	136.4	144.1	151.2	157.6
164	108.8	119.8	129.5	138.1	145.9	153.0	159.5
166	110.1	121.2	131.0	139.8	147.7	154.9	161.5
168	111.4	122.7	132.6	141.5	149.5	156.8	163.4
170	112.8	124.2	134.2	143.2	151.3	158.6	165.4
172	114.1	125.6	135.8	144.9	153.0	160.5	167.3
174	115.4	127.1	137.4	146.5	154.8	162.4	169.3
176	116.8	128.5	138.9	148.2	156.6	164.2	171.2
178	118.1	130.0	140.5	149.9	158.4	166.1	173.1
180	119.4	131.5	142.1	151.6	160.2	168.0	175.1
182	120.7	132.9	143.7	153.3	161.9	169.8	177.0
184	122.1	134.4	145.2	155.0	163.7	171.7	179.0
186	123.4	135.8	146.8	156.6	165.5	173.6	180.9
188	124.7	137.3	148.4	158.3	167.3	175.4	182.9
190	126.0	138.8	150.0	160.0	169.1	177.3	184.8
192	127.4	140.2	151.6	161.7	170.8	179.2	186.8
194	128.7	141.7	153.1	163.4	172.6	181.0	188.7
196	130.0	143.1	154.7	165.1	174.4	182.9	190.7
198	131.3	144.6	156.3	166.7	176.2	184.8	192.6
200	132.7	146.1	157.9	168.4	178.0	186.6	194.5
202	134.0	147.5	159.5	170.1	179.7	188.5	196.5
204	135.3	149.0	161.0	171.8	181.5	190.3	198.4
206	136.7	150.4	162.6	173.5	183.3	192.2	200.4
208	138.0	151.9	164.2	175.2	185.1	194.1	202.3
210	139.3	153.4	165.8	176.9	186.9	195.9	204.3
212	140.6	154.8	167.3	178.5	188.6	197.8	206.2
214	142.0	156.3	168.9	180.2	190.4	199.7	208.2
216	143.3	157.7	170.5	181.9	192.2	201.5	210.1
218	144.6	159.2	172.1	183.6	194.0	203.4	212.1

Equation Used:
DBH=DSIB+0.032043*DSIB*(2.3-SH)+0.585026*DSIB*Ln((SH+1.0)/2.3)
Based on 652 Trees. Standard Error of Estimated DBH = 5.70 cm

TABLE 5 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
220	145.9	160.7	173.7	185.3	195.8	205.3	214.0
222	147.3	162.1	175.2	187.0	197.5	207.1	215.9
224	148.6	163.6	176.8	188.6	199.3	209.0	217.9
226	149.9	165.0	178.4	190.3	201.1	210.9	219.8
228	151.3	166.5	180.0	192.0	202.9	212.7	221.8
230	152.6	168.0	181.6	193.7	204.7	214.6	223.7
232	153.9	169.4	183.1	195.4	206.4	216.5	225.7
234	155.2	170.9	184.7	197.1	208.2	218.3	227.6
236	156.6	172.4	186.3	198.8	210.0	220.2	229.6
238	157.9	173.8	187.9	200.4	211.8	222.1	231.5
240	159.2	175.3	189.5	202.1	213.5	223.9	233.5
242	160.5	176.7	191.0	203.8	215.3	225.8	235.4
244	161.9	178.2	192.6	205.5	217.1	227.7	237.3
246	163.2	179.7	194.2	207.2	218.9	229.5	239.3
248	164.5	181.1	195.8	208.9	220.7	231.4	241.2
250	165.8	182.6	197.3	210.5	222.4	233.3	243.2
252	167.2	184.0	198.9	212.2	224.2	235.1	245.1
254	168.5	185.5	200.5	213.9	226.0	237.0	247.1
256	169.8	187.0	202.1	215.6	227.8	238.9	249.0
258	171.2	188.4	203.7	217.3	229.6	240.7	251.0
260	172.5	189.9	205.2	219.0	231.3	242.6	252.9
262	173.8	191.3	206.8	220.6	233.1	244.5	254.9
264	175.1	192.8	208.4	222.3	234.9	246.3	256.8
266	176.5	194.3	210.0	224.0	236.7	248.2	258.7
268	177.8	195.7	211.6	225.7	238.5	250.1	260.7
270	179.1	197.2	213.1	227.4	240.2	251.9	262.6
272	180.4	198.6	214.7	229.1	242.0	253.8	264.6
274	181.8	200.1	216.3	230.8	243.8	255.7	266.5
276	183.1	201.6	217.9	232.4	245.6	257.5	268.5
278	184.4	203.0	219.4	234.1	247.4	259.4	270.4
280	185.7	204.5	221.0	235.8	249.1	261.3	272.4
282	187.1	205.9	222.6	237.5	250.9	263.1	274.3
284	188.4	207.4	224.2	239.2	252.7	265.0	276.3
286	189.7	208.9	225.8	240.9	254.5	266.9	278.2
288	191.1	210.3	227.3	242.5	256.3	268.7	280.1

TABLE 5 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
290	192.4	211.8	228.9	244.2	258.0	270.6	282.1
292	193.7	213.2	230.5	245.9	259.8	272.5	284.0
294	195.0	214.7	232.1	247.6	261.6	274.3	286.0
296	196.4	216.2	233.7	249.3	263.4	276.2	287.9
298	197.7	217.6	235.2	251.0	265.2	278.1	289.9
300	199.0	219.1	236.8	252.6	266.9	279.9	291.8
302	200.3	220.6	238.4	254.3	268.7	281.8	293.8
304	201.7	222.0	240.0	256.0	270.5	283.7	295.7
306	203.0	223.5	241.6	257.7	272.3	285.5	297.7
308	204.3	224.9	243.1	259.4	274.1	287.4	299.6
310	205.6	226.4	244.7	261.1	275.8	289.3	301.5
312	207.0	227.9	246.3	262.8	277.6	291.1	303.5
314	208.3	229.3	247.9	264.4	279.4	293.0	305.4
316	209.6	230.8	249.4	266.1	281.2	294.9	307.4
318	211.0	232.2	251.0	267.8	283.0	296.7	309.3
320	212.3	233.7	252.6	269.5	284.7	298.6	311.3
322	213.6	235.2	254.2	271.2	286.5	300.5	313.2
324	214.9	236.6	255.8	272.9	288.3	302.3	315.2
326	216.3	238.1	257.3	274.5	290.1	304.2	317.1
328	217.6	239.5	258.9	276.2	291.8	306.1	319.1
330	218.9	241.0	260.5	277.9	293.6	307.9	321.0
332	220.2	242.5	262.1	279.6	295.4	309.8	322.9
334	221.6	243.9	263.7	281.3	297.2	311.7	324.9
336	222.9	245.4	265.2	283.0	299.0	313.5	326.8
338	224.2	246.8	266.8	284.7	300.7	315.4	328.8
340	225.6	248.3	268.4	286.3	302.5	317.2	330.7
342	226.9	249.8	270.0	288.0	304.3	319.1	332.7
344	228.2	251.2	271.5	289.7	306.1	321.0	334.6
346	229.5	252.7	273.1	291.4	307.9	322.8	336.6
348	230.9	254.1	274.7	293.1	309.6	324.7	338.5
350	232.2	255.6	276.3	294.8	311.4	326.6	340.5
352	233.5	257.1	277.9	296.4	313.2	328.4	342.4
354	234.8	258.5	279.4	298.1	315.0	330.3	344.3
356	236.2	260.0	281.0	299.8	316.8	332.2	346.3
358	237.5	261.4	282.6	301.5	318.5	334.0	348.2

Equation Used:
DBH=DSIB+0.032043*DSIB*(2.3-SH)+0.585026*DSIB*Ln((SH+1.0)/2.3)
Based on 652 Trees. Standard Error of Estimated DBH = 5.70 cm

TABLE 6 **Stump and Breast Height Diameter Tables for: Western Redcedar all ages in Forest Inventory Zones D to L**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	6.7	7.4	8.1	8.6	9.1	9.6	10.0
12	8.1	8.9	9.7	10.4	11.0	11.5	12.0
14	9.4	10.4	11.3	12.1	12.8	13.4	14.0
16	10.8	11.9	12.9	13.8	14.6	15.3	16.0
18	12.1	13.4	14.5	15.5	16.4	17.2	18.0
20	13.5	14.9	16.1	17.3	18.3	19.2	20.0
22	14.8	16.4	17.8	19.0	20.1	21.1	22.0
24	16.2	17.9	19.4	20.7	21.9	23.0	24.0
26	17.5	19.4	21.0	22.4	23.7	24.9	26.0
28	18.8	20.8	22.6	24.2	25.6	26.8	28.0
30	20.2	22.3	24.2	25.9	27.4	28.7	30.0
32	21.5	23.8	25.8	27.6	29.2	30.6	32.0
34	22.9	25.3	27.4	29.3	31.0	32.6	33.9
36	24.2	26.8	29.1	31.1	32.9	34.5	35.9
38	25.6	28.3	30.7	32.8	34.7	36.4	37.9
40	26.9	29.8	32.3	34.5	36.5	38.3	39.9
42	28.3	31.3	33.9	36.2	38.3	40.2	41.9
44	29.6	32.8	35.5	38.0	40.2	42.1	43.9
46	31.0	34.2	37.1	39.7	42.0	44.0	45.9
48	32.3	35.7	38.7	41.4	43.8	46.0	47.9
50	33.6	37.2	40.4	43.1	45.6	47.9	49.9
52	35.0	38.7	42.0	44.9	47.5	49.8	51.9
54	36.3	40.2	43.6	46.6	49.3	51.7	53.9
56	37.7	41.7	45.2	48.3	51.1	53.6	55.9
58	39.0	43.2	46.8	50.0	52.9	55.5	57.9
60	40.4	44.7	48.4	51.8	54.8	57.5	59.9
62	41.7	46.2	50.0	53.5	56.6	59.4	61.9
64	43.1	47.6	51.7	55.2	58.4	61.3	63.9
66	44.4	49.1	53.3	56.9	60.2	63.2	65.9
68	45.8	50.6	54.9	58.7	62.1	65.1	67.9
70	47.1	52.1	56.5	60.4	63.9	67.0	69.9
72	48.5	53.6	58.1	62.1	65.7	68.9	71.9
74	49.8	55.1	59.7	63.8	67.5	70.9	73.9
76	51.1	56.6	61.3	65.6	69.4	72.8	75.9
78	52.5	58.1	63.0	67.3	71.2	74.7	77.9

Equation Used:
DBH=DSIB+0.059052*DSIB*(2.3-SH)+0.655006*DSIB*Ln((SH+1.0)/2.3)
Based on 1593 Trees. Standard Error of Estimated DBH = 4.16 cm

TABLE 6 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	53.8	59.6	64.6	69.0	73.0	76.6	79.9
82	55.2	61.0	66.2	70.7	74.8	78.5	81.9
84	56.5	62.5	67.8	72.5	76.7	80.4	83.9
86	57.9	64.0	69.4	74.2	78.5	82.3	85.9
88	59.2	65.5	71.0	75.9	80.3	84.3	87.9
90	60.6	67.0	72.6	77.6	82.1	86.2	89.9
92	61.9	68.5	74.2	79.4	84.0	88.1	91.9
94	63.3	70.0	75.9	81.1	85.8	90.0	93.9
96	64.6	71.5	77.5	82.8	87.6	91.9	95.9
98	65.9	73.0	79.1	84.5	89.4	93.8	97.8
100	67.3	74.4	80.7	86.3	91.3	95.8	99.8
102	68.6	75.9	82.3	88.0	93.1	97.7	101.8
104	70.0	77.4	83.9	89.7	94.9	99.6	103.8
106	71.3	78.9	85.5	91.4	96.7	101.5	105.8
108	72.7	80.4	87.2	93.2	98.6	103.4	107.8
110	74.0	81.9	88.8	94.9	100.4	105.3	109.8
112	75.4	83.4	90.4	96.6	102.2	107.2	111.8
114	76.7	84.9	92.0	98.3	104.0	109.2	113.8
116	78.1	86.3	93.6	100.1	105.9	111.1	115.8
118	79.4	87.8	95.2	101.8	107.7	113.0	117.8
120	80.8	89.3	96.8	103.5	109.5	114.9	119.8
122	82.1	90.8	98.5	105.2	111.3	116.8	121.8
124	83.4	92.3	100.1	107.0	113.2	118.7	123.8
126	84.8	93.8	101.7	108.7	115.0	120.6	125.8
128	86.1	95.3	103.3	110.4	116.8	122.6	127.8
130	87.5	96.8	104.9	112.1	118.6	124.5	129.8
132	88.8	98.3	106.5	113.9	120.5	126.4	131.8
134	90.2	99.7	108.1	115.6	122.3	128.3	133.8
136	91.5	101.2	109.8	117.3	124.1	130.2	135.8
138	92.9	102.7	111.4	119.1	125.9	132.1	137.8
140	94.2	104.2	113.0	120.8	127.8	134.1	139.8
142	95.6	105.7	114.6	122.5	129.6	136.0	141.8
144	96.9	107.2	116.2	124.2	131.4	137.9	143.8
146	98.3	108.7	117.8	126.0	133.2	139.8	145.8
148	99.6	110.2	119.4	127.7	135.1	141.7	147.8

TABLE 6 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	100.9	111.7	121.1	129.4	136.9	143.6	149.8
152	102.3	113.1	122.7	131.1	138.7	145.5	151.8
154	103.6	114.6	124.3	132.9	140.5	147.5	153.8
156	105.0	116.1	125.9	134.6	142.4	149.4	155.8
158	106.3	117.6	127.5	136.3	144.2	151.3	157.8
160	107.7	119.1	129.1	138.0	146.0	153.2	159.8
162	109.0	120.6	130.7	139.8	147.8	155.1	161.7
164	110.4	122.1	132.4	141.5	149.7	157.0	163.7
166	111.7	123.6	134.0	143.2	151.5	159.0	165.7
168	113.1	125.1	135.6	144.9	153.3	160.9	167.7
170	114.4	126.5	137.2	146.7	155.1	162.8	169.7
172	115.7	128.0	138.8	148.4	157.0	164.7	171.7
174	117.1	129.5	140.4	150.1	158.8	166.6	173.7
176	118.4	131.0	142.0	151.8	160.6	168.5	175.7
178	119.8	132.5	143.7	153.6	162.4	170.4	177.7
180	121.1	134.0	145.3	155.3	164.3	172.4	179.7
182	122.5	135.5	146.9	157.0	166.1	174.3	181.7
184	123.8	137.0	148.5	158.7	167.9	176.2	183.7
186	125.2	138.5	150.1	160.5	169.7	178.1	185.7
188	126.5	139.9	151.7	162.2	171.6	180.0	187.7
190	127.9	141.4	153.3	163.9	173.4	181.9	189.7
192	129.2	142.9	155.0	165.6	175.2	183.8	191.7
194	130.6	144.4	156.6	167.4	177.0	185.8	193.7
196	131.9	145.9	158.2	169.1	178.9	187.7	195.7
198	133.2	147.4	159.8	170.8	180.7	189.6	197.7
200	134.6	148.9	161.4	172.5	182.5	191.5	199.7
202	135.9	150.4	163.0	174.3	184.3	193.4	201.7
204	137.3	151.9	164.6	176.0	186.2	195.3	203.7
206	138.6	153.3	166.3	177.7	188.0	197.3	205.7
208	140.0	154.8	167.9	179.4	189.8	199.2	207.7
210	141.3	156.3	169.5	181.2	191.6	201.1	209.7
212	142.7	157.8	171.1	182.9	193.5	203.0	211.7
214	144.0	159.3	172.7	184.6	195.3	204.9	213.7
216	145.4	160.8	174.3	186.3	197.1	206.8	215.7
218	146.7	162.3	175.9	188.1	198.9	208.7	217.7

Equation Used:
DBH=DSIB+0.059052*DSIB*(2.3-SH)+0.655006*DSIB*Ln((SH+1.0)/2.3)
Based on 1593 Trees. Standard Error of Estimated DBH = 4.16 cm

TABLE 6 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
220	148.0	163.8	177.6	189.8	200.8	210.7	219.7
222	149.4	165.3	179.2	191.5	202.6	212.6	221.7
224	150.7	166.7	180.8	193.2	204.4	214.5	223.7
226	152.1	168.2	182.4	195.0	206.2	216.4	225.6
228	153.4	169.7	184.0	196.7	208.1	218.3	227.6
230	154.8	171.2	185.6	198.4	209.9	220.2	229.6
232	156.1	172.7	187.2	200.1	211.7	222.1	231.6
234	157.5	174.2	188.9	201.9	213.5	224.1	233.6
236	158.8	175.7	190.5	203.6	215.4	226.0	235.6
238	160.2	177.2	192.1	205.3	217.2	227.9	237.6
240	161.5	178.7	193.7	207.0	219.0	229.8	239.6
242	162.9	180.1	195.3	208.8	220.8	231.7	241.6
244	164.2	181.6	196.9	210.5	222.7	233.6	243.6
246	165.5	183.1	198.5	212.2	224.5	235.6	245.6
248	166.9	184.6	200.2	213.9	226.3	237.5	247.6
250	168.2	186.1	201.8	215.7	228.1	239.4	249.6
252	169.6	187.6	203.4	217.4	230.0	241.3	251.6
254	170.9	189.1	205.0	219.1	231.8	243.2	253.6
256	172.3	190.6	206.6	220.8	233.6	245.1	255.6
258	173.6	192.1	208.2	222.6	235.4	247.0	257.6
260	175.0	193.5	209.8	224.3	237.3	249.0	259.6
262	176.3	195.0	211.5	226.0	239.1	250.9	261.6
264	177.7	196.5	213.1	227.7	240.9	252.8	263.6
266	179.0	198.0	214.7	229.5	242.7	254.7	265.6
268	180.3	199.5	216.3	231.2	244.6	256.6	267.6
270	181.7	201.0	217.9	232.9	246.4	258.5	269.6
272	183.0	202.5	219.5	234.6	248.2	260.4	271.6
274	184.4	204.0	221.1	236.4	250.0	262.4	273.6
276	185.7	205.5	222.7	238.1	251.9	264.3	275.6
278	187.1	206.9	224.4	239.8	253.7	266.2	277.6
280	188.4	208.4	226.0	241.6	255.5	268.1	279.6
282	189.8	209.9	227.6	243.3	257.3	270.0	281.6
284	191.1	211.4	229.2	245.0	259.2	271.9	283.6
286	192.5	212.9	230.8	246.7	261.0	273.9	285.6
288	193.8	214.4	232.4	248.5	262.8	275.8	287.6

TABLE 7 **Stump and Breast Height Diameter Tables for: Immature Western Hemlock** up to 120 Years in **Forest Inventory Zones A,B,C**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.6	9.1	9.4	9.7	10.0	10.3	10.5
12	10.4	10.9	11.3	11.7	12.0	12.3	12.6
14	12.1	12.7	13.2	13.6	14.0	14.4	14.7
16	13.8	14.5	15.1	15.6	16.0	16.4	16.8
18	15.6	16.3	17.0	17.5	18.0	18.5	18.8
20	17.3	18.1	18.8	19.5	20.0	20.5	20.9
22	19.0	19.9	20.7	21.4	22.0	22.6	23.0
24	20.7	21.7	22.6	23.4	24.0	24.6	25.1
26	22.5	23.6	24.5	25.3	26.0	26.7	27.2
28	24.2	25.4	26.4	27.3	28.0	28.7	29.3
30	25.9	27.2	28.3	29.2	30.0	30.8	31.4
32	27.6	29.0	30.1	31.2	32.0	32.8	33.5
34	29.4	30.8	32.0	33.1	34.0	34.9	35.6
36	31.1	32.6	33.9	35.0	36.0	36.9	37.7
38	32.8	34.4	35.8	37.0	38.0	39.0	39.8
40	34.6	36.2	37.7	38.9	40.0	41.0	41.9
42	36.3	38.0	39.6	40.9	42.0	43.1	44.0
44	38.0	39.9	41.5	42.8	44.0	45.1	46.1
46	39.7	41.7	43.3	44.8	46.1	47.2	48.2
48	41.5	43.5	45.2	46.7	48.1	49.2	50.3
50	43.2	45.3	47.1	48.7	50.1	51.3	52.4
52	44.9	47.1	49.0	50.6	52.1	53.3	54.4
54	46.7	48.9	50.9	52.6	54.1	55.4	56.5
56	48.4	50.7	52.8	54.5	56.1	57.4	58.6
58	50.1	52.5	54.6	56.5	58.1	59.5	60.7
60	51.8	54.4	56.5	58.4	60.1	61.5	62.8
62	53.6	56.2	58.4	60.4	62.1	63.6	64.9
64	55.3	58.0	60.3	62.3	64.1	65.6	67.0
66	57.0	59.8	62.2	64.3	66.1	67.7	69.1
68	58.7	61.6	64.1	66.2	68.1	69.7	71.2
70	60.5	63.4	65.9	68.1	70.1	71.8	73.3
72	62.2	65.2	67.8	70.1	72.1	73.8	75.4
74	63.9	67.0	69.7	72.0	74.1	75.9	77.5
76	65.7	68.9	71.6	74.0	76.1	77.9	79.6
78	67.4	70.7	73.5	75.9	78.1	80.0	81.7

Equation Used:
DBH=DSIB+0.077996*DSIB*(2.3-SH)+0.438284*DSIB*Ln((SH+1.0)/2.3)
Based on 720 Trees. Standard Error of Estimated DBH = 1.73 cm

TABLE 7 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	69.1	72.5	75.4	77.9	80.1	82.0	83.8
82	70.8	74.3	77.3	79.8	82.1	84.1	85.9
84	72.6	76.1	79.1	81.8	84.1	86.1	88.0
86	74.3	77.9	81.0	83.7	86.1	88.2	90.0
88	76.0	79.7	82.9	85.7	88.1	90.2	92.1
90	77.8	81.5	84.8	87.6	90.1	92.3	94.2
92	79.5	83.3	86.7	89.6	92.1	94.3	96.3
94	81.2	85.2	88.6	91.5	94.1	96.4	98.4
96	82.9	87.0	90.4	93.5	96.1	98.4	100.5
98	84.7	88.8	92.3	95.4	98.1	100.5	102.6
100	86.4	90.6	94.2	97.4	100.1	102.5	104.7
102	88.1	92.4	96.1	99.3	102.1	104.6	106.8
104	89.8	94.2	98.0	101.2	104.1	106.6	108.9
106	91.6	96.0	99.9	103.2	106.1	108.7	111.0
108	93.3	97.8	101.7	105.1	108.1	110.7	113.1
110	95.0	99.7	103.6	107.1	110.1	112.8	115.2
112	96.8	101.5	105.5	109.0	112.1	114.9	117.3
114	98.5	103.3	107.4	111.0	114.1	116.9	119.4
116	100.2	105.1	109.3	112.9	116.1	119.0	121.5
118	101.9	106.9	111.2	114.9	118.1	121.0	123.6
120	103.7	108.7	113.1	116.8	120.1	123.1	125.6
122	105.4	110.5	114.9	118.8	122.1	125.1	127.7
124	107.1	112.3	116.8	120.7	124.1	127.2	129.8
126	108.9	114.1	118.7	122.7	126.1	129.2	131.9
128	110.6	116.0	120.6	124.6	128.1	131.3	134.0
130	112.3	117.8	122.5	126.6	130.1	133.3	136.1
132	114.0	119.6	124.4	128.5	132.1	135.4	138.2
134	115.8	121.4	126.2	130.5	134.1	137.4	140.3
136	117.5	123.2	128.1	132.4	136.2	139.5	142.4
138	119.2	125.0	130.0	134.3	138.2	141.5	144.5
140	120.9	126.8	131.9	136.3	140.2	143.6	146.6
142	122.7	128.6	133.8	138.2	142.2	145.6	148.7
144	124.4	130.5	135.7	140.2	144.2	147.7	150.8
146	126.1	132.3	137.5	142.1	146.2	149.7	152.9
148	127.9	134.1	139.4	144.1	148.2	151.8	155.0

TABLE 7 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	129.6	135.9	141.3	146.0	150.2	153.8	157.1
152	131.3	137.7	143.2	148.0	152.2	155.9	159.2
154	133.0	139.5	145.1	149.9	154.2	157.9	161.2
156	134.8	141.3	147.0	151.9	156.2	160.0	163.3
158	136.5	143.1	148.9	153.8	158.2	162.0	165.4
160	138.2	144.9	150.7	155.8	160.2	164.1	167.5
162	140.0	146.8	152.6	157.7	162.2	166.1	169.6
164	141.7	148.6	154.5	159.7	164.2	168.2	171.7
166	143.4	150.4	156.4	161.6	166.2	170.2	173.8
168	145.1	152.2	158.3	163.6	168.2	172.3	175.9
170	146.9	154.0	160.2	165.5	170.2	174.3	178.0
172	148.6	155.8	162.0	167.4	172.2	176.4	180.1
174	150.3	157.6	163.9	169.4	174.2	178.4	182.2
176	152.0	159.4	165.8	171.3	176.2	180.5	184.3
178	153.8	161.3	167.7	173.3	178.2	182.5	186.4
180	155.5	163.1	169.6	175.2	180.2	184.6	188.5
182	157.2	164.9	171.5	177.2	182.2	186.6	190.6
184	159.0	166.7	173.3	179.1	184.2	188.7	192.7
186	160.7	168.5	175.2	181.1	186.2	190.7	194.8
188	162.4	170.3	177.1	183.0	188.2	192.8	196.8
190	164.1	172.1	179.0	185.0	190.2	194.8	198.9
192	165.9	173.9	180.9	186.9	192.2	196.9	201.0
194	167.6	175.8	182.8	188.9	194.2	198.9	203.1
196	169.3	177.6	184.7	190.8	196.2	201.0	205.2
198	171.1	179.4	186.5	192.8	198.2	203.0	207.3
200	172.8	181.2	188.4	194.7	200.2	205.1	209.4
202	174.5	183.0	190.3	196.7	202.2	207.1	211.5
204	176.2	184.8	192.2	198.6	204.2	209.2	213.6
206	178.0	186.6	194.1	200.5	206.2	211.2	215.7
208	179.7	188.4	196.0	202.5	208.2	213.3	217.8
210	181.4	190.2	197.8	204.4	210.2	215.3	219.9
212	183.1	192.1	199.7	206.4	212.2	217.4	222.0
214	184.9	193.9	201.6	208.3	214.2	219.4	224.1
216	186.6	195.7	203.5	210.3	216.2	221.5	226.2
218	188.3	197.5	205.4	212.2	218.2	223.5	228.3

Equation Used:
DBH=DSIB+0.077996*DSIB*(2.3-SH)+0.438284*DSIB*Ln((SH+1.0)/2.3)
Based on 720 Trees. Standard Error of Estimated DBH = 1.73 cm

TABLE 8 **Stump and Breast Height Diameter Tables for: Mature Western Hemlock** over 120 Years **in Forest Inventory Zones A,B,C**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	7.7	8.2	8.7	9.2	9.5	9.9	10.2
12	9.2	9.9	10.5	11.0	11.4	11.9	12.2
14	10.8	11.5	12.2	12.8	13.4	13.8	14.3
16	12.3	13.2	14.0	14.7	15.3	15.8	16.3
18	13.8	14.8	15.7	16.5	17.2	17.8	18.3
20	15.4	16.5	17.5	18.3	19.1	19.8	20.4
22	16.9	18.1	19.2	20.1	21.0	21.7	22.4
24	18.4	19.8	21.0	22.0	22.9	23.7	24.5
26	20.0	21.4	22.7	23.8	24.8	25.7	26.5
28	21.5	23.1	24.4	25.6	26.7	27.7	28.5
30	23.1	24.7	26.2	27.5	28.6	29.6	30.6
32	24.6	26.4	27.9	29.3	30.5	31.6	32.6
34	26.1	28.0	29.7	31.1	32.4	33.6	34.7
36	27.7	29.7	31.4	33.0	34.3	35.6	36.7
38	29.2	31.3	33.2	34.8	36.3	37.6	38.7
40	30.7	33.0	34.9	36.6	38.2	39.5	40.8
42	32.3	34.6	36.7	38.5	40.1	41.5	42.8
44	33.8	36.3	38.4	40.3	42.0	43.5	44.8
46	35.3	37.9	40.2	42.1	43.9	45.5	46.9
48	36.9	39.6	41.9	44.0	45.8	47.4	48.9
50	38.4	41.2	43.6	45.8	47.7	49.4	51.0
52	40.0	42.9	45.4	47.6	49.6	51.4	53.0
54	41.5	44.5	47.1	49.5	51.5	53.4	55.0
56	43.0	46.2	48.9	51.3	53.4	55.3	57.1
58	44.6	47.8	50.6	53.1	55.3	57.3	59.1
60	46.1	49.5	52.4	55.0	57.2	59.3	61.2
62	47.6	51.1	54.1	56.8	59.2	61.3	63.2
64	49.2	52.8	55.9	58.6	61.1	63.3	65.2
66	50.7	54.4	57.6	60.4	63.0	65.2	67.3
68	52.3	56.1	59.4	62.3	64.9	67.2	69.3
70	53.8	57.7	61.1	64.1	66.8	69.2	71.3
72	55.3	59.3	62.9	65.9	68.7	71.2	73.4
74	56.9	61.0	64.6	67.8	70.6	73.1	75.4
76	58.4	62.6	66.3	69.6	72.5	75.1	77.5
78	59.9	64.3	68.1	71.4	74.4	77.1	79.5

Equation Used:
DBH=DSIB+0.064571*DSIB*(2.3-SH)+0.534355*DSIB*Ln((SH+1.0)/2.3)
Based on 1285 Trees. Standard Error of Estimated DBH = 4.68 cm

TABLE 8 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	61.5	65.9	69.8	73.3	76.3	79.1	81.5
82	63.0	67.6	71.6	75.1	78.2	81.0	83.6
84	64.5	69.2	73.3	76.9	80.1	83.0	85.6
86	66.1	70.9	75.1	78.8	82.0	85.0	87.7
88	67.6	72.5	76.8	80.6	84.0	87.0	89.7
90	69.2	74.2	78.6	82.4	85.9	88.9	91.7
92	70.7	75.8	80.3	84.3	87.8	90.9	93.8
94	72.2	77.5	82.1	86.1	89.7	92.9	95.8
96	73.8	79.1	83.8	87.9	91.6	94.9	97.8
98	75.3	80.8	85.5	89.8	93.5	96.9	99.9
100	76.8	82.4	87.3	91.6	95.4	98.8	101.9
102	78.4	84.1	89.0	93.4	97.3	100.8	104.0
104	79.9	85.7	90.8	95.2	99.2	102.8	106.0
106	81.5	87.4	92.5	97.1	101.1	104.8	108.0
108	83.0	89.0	94.3	98.9	103.0	106.7	110.1
110	84.5	90.7	96.0	100.7	104.9	108.7	112.1
112	86.1	92.3	97.8	102.6	106.9	110.7	114.2
114	87.6	94.0	99.5	104.4	108.8	112.7	116.2
116	89.1	95.6	101.3	106.2	110.7	114.6	118.2
118	90.7	97.3	103.0	108.1	112.6	116.6	120.3
120	92.2	98.9	104.8	109.9	114.5	118.6	122.3
122	93.7	100.6	106.5	111.7	116.4	120.6	124.3
124	95.3	102.2	108.2	113.6	118.3	122.6	126.4
126	96.8	103.9	110.0	115.4	120.2	124.5	128.4
128	98.4	105.5	111.7	117.2	122.1	126.5	130.5
130	99.9	107.2	113.5	119.1	124.0	128.5	132.5
132	101.4	108.8	115.2	120.9	125.9	130.5	134.5
134	103.0	110.5	117.0	122.7	127.8	132.4	136.6
136	104.5	112.1	118.7	124.6	129.8	134.4	138.6
138	106.0	113.7	120.5	126.4	131.7	136.4	140.7
140	107.6	115.4	122.2	128.2	133.6	138.4	142.7
142	109.1	117.0	124.0	130.1	135.5	140.3	144.7
144	110.7	118.7	125.7	131.9	137.4	142.3	146.8
146	112.2	120.3	127.4	133.7	139.3	144.3	148.8
148	113.7	122.0	129.2	135.5	141.2	146.3	150.8

TABLE 8 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	115.3	123.6	130.9	137.4	143.1	148.2	152.9
152	116.8	125.3	132.7	139.2	145.0	150.2	154.9
154	118.3	126.9	134.4	141.0	146.9	152.2	157.0
156	119.9	128.6	136.2	142.9	148.8	154.2	159.0
158	121.4	130.2	137.9	144.7	150.7	156.2	161.0
160	123.0	131.9	139.7	146.5	152.6	158.1	163.1
162	124.5	133.5	141.4	148.4	154.6	160.1	165.1
164	126.0	135.2	143.2	150.2	156.5	162.1	167.2
166	127.6	136.8	144.9	152.0	158.4	164.1	169.2
168	129.1	138.5	146.7	153.9	160.3	166.0	171.2
170	130.6	140.1	148.4	155.7	162.2	168.0	173.3
172	132.2	141.8	150.1	157.5	164.1	170.0	175.3
174	133.7	143.4	151.9	159.4	166.0	172.0	177.3
176	135.2	145.1	153.6	161.2	167.9	173.9	179.4
178	136.8	146.7	155.4	163.0	169.8	175.9	181.4
180	138.3	148.4	157.1	164.9	171.7	177.9	183.5
182	139.9	150.0	158.9	166.7	173.6	179.9	185.5
184	141.4	151.7	160.6	168.5	175.5	181.8	187.5
186	142.9	153.3	162.4	170.3	177.5	183.8	189.6
188	144.5	155.0	164.1	172.2	179.4	185.8	191.6
190	146.0	156.6	165.9	174.0	181.3	187.8	193.7
192	147.5	158.3	167.6	175.8	183.2	189.8	195.7
194	149.1	159.9	169.3	177.7	185.1	191.7	197.7
196	150.6	161.6	171.1	179.5	187.0	193.7	199.8
198	152.2	163.2	172.8	181.3	188.9	195.7	201.8
200	153.7	164.9	174.6	183.2	190.8	197.7	203.8
202	155.2	166.5	176.3	185.0	192.7	199.6	205.9
204	156.8	168.2	178.1	186.8	194.6	201.6	207.9
206	158.3	169.8	179.8	188.7	196.5	203.6	210.0
208	159.8	171.4	181.6	190.5	198.4	205.6	212.0
210	161.4	173.1	183.3	192.3	200.4	207.5	214.0
212	162.9	174.7	185.1	194.2	202.3	209.5	216.1
214	164.4	176.4	186.8	196.0	204.2	211.5	218.1
216	166.0	178.0	188.6	197.8	206.1	213.5	220.2
218	167.5	179.7	190.3	199.7	208.0	215.5	222.2

Equation Used:
DBH=DSIB+0.064571*DSIB*(2.3-SH)+0.534355*DSIB*Ln((SH+1.0)/2.3)
Based on 1285 Trees. Standard Error of Estimated DBH = 4.68 cm

TABLE 8 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
220	169.1	181.3	192.0	201.5	209.9	217.4	224.2
222	170.6	183.0	193.8	203.3	211.8	219.4	226.3
224	172.1	184.6	195.5	205.2	213.7	221.4	228.3
226	173.7	186.3	197.3	207.0	215.6	223.4	230.3
228	175.2	187.9	199.0	208.8	217.5	225.3	232.4
230	176.7	189.6	200.8	210.6	219.4	227.3	234.4
232	178.3	191.2	202.5	212.5	221.3	229.3	236.5
234	179.8	192.9	204.3	214.3	223.2	231.3	238.5
236	181.4	194.5	206.0	216.1	225.2	233.2	240.5
238	182.9	196.2	207.8	218.0	227.1	235.2	242.6
240	184.4	197.8	209.5	219.8	229.0	237.2	244.6
242	186.0	199.5	211.2	221.6	230.9	239.2	246.7
244	187.5	201.1	213.0	223.5	232.8	241.1	248.7
246	189.0	202.8	214.7	225.3	234.7	243.1	250.7
248	190.6	204.4	216.5	227.1	236.6	245.1	252.8
250	192.1	206.1	218.2	229.0	238.5	247.1	254.8
252	193.6	207.7	220.0	230.8	240.4	249.1	256.8
254	195.2	209.4	221.7	232.6	242.3	251.0	258.9
256	196.7	211.0	223.5	234.5	244.2	253.0	260.9
258	198.3	212.7	225.2	236.3	246.1	255.0	263.0
260	199.8	214.3	227.0	238.1	248.1	257.0	265.0
262	201.3	216.0	228.7	240.0	250.0	258.9	267.0
264	202.9	217.6	230.5	241.8	251.9	260.9	269.1
266	204.4	219.3	232.2	243.6	253.8	262.9	271.1
268	205.9	220.9	233.9	245.4	255.7	264.9	273.2
270	207.5	222.6	235.7	247.3	257.6	266.8	275.2
272	209.0	224.2	237.4	249.1	259.5	268.8	277.2
274	210.6	225.8	239.2	250.9	261.4	270.8	279.3
276	212.1	227.5	240.9	252.8	263.3	272.8	281.3
278	213.6	229.1	242.7	254.6	265.2	274.7	283.3
280	215.2	230.8	244.4	256.4	267.1	276.7	285.4
282	216.7	232.4	246.2	258.3	269.0	278.7	287.4
284	218.2	234.1	247.9	260.1	270.9	280.7	289.5
286	219.8	235.7	249.7	261.9	272.9	282.7	291.5
288	221.3	237.4	251.4	263.8	274.8	284.6	293.5

TABLE 8 (Concluded)

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
290	222.8	239.0	253.2	265.6	276.7	286.6	295.6
292	224.4	240.7	254.9	267.4	278.6	288.6	297.6
294	225.9	242.3	256.6	269.3	280.5	290.6	299.7
296	227.5	244.0	258.4	271.1	282.4	292.5	301.7
298	229.0	245.6	260.1	272.9	284.3	294.5	303.7
300	230.5	247.3	261.9	274.8	286.2	296.5	305.8
302	232.1	248.9	263.6	276.6	288.1	298.5	307.8
304	233.6	250.6	265.4	278.4	290.0	300.4	309.8
306	235.1	252.2	267.1	280.2	291.9	302.4	311.9
308	236.7	253.9	268.9	282.1	293.8	304.4	313.9
310	238.2	255.5	270.6	283.9	295.8	306.4	316.0
312	239.8	257.2	272.4	285.7	297.7	308.4	318.0
314	241.3	258.8	274.1	287.6	299.6	310.3	320.0
316	242.8	260.5	275.8	289.4	301.5	312.3	322.1
318	244.4	262.1	277.6	291.2	303.4	314.3	324.1
320	245.9	263.8	279.3	293.1	305.3	316.3	326.2
322	247.4	265.4	281.1	294.9	307.2	318.2	328.2
324	249.0	267.1	282.8	296.7	309.1	320.2	330.2
326	250.5	268.7	284.6	298.6	311.0	322.2	332.3
328	252.0	270.4	286.3	300.4	312.9	324.2	334.3
330	253.6	272.0	288.1	302.2	314.8	326.1	336.3
332	255.1	273.7	289.8	304.1	316.7	328.1	338.4
334	256.7	275.3	291.6	305.9	318.7	330.1	340.4
336	258.2	277.0	293.3	307.7	320.6	332.1	342.5
338	259.7	278.6	295.1	309.6	322.5	334.0	344.5
340	261.3	280.3	296.8	311.4	324.4	336.0	346.5
342	262.8	281.9	298.5	313.2	326.3	338.0	348.6
344	264.3	283.5	300.3	315.1	328.2	340.0	350.6
346	265.9	285.2	302.0	316.9	330.1	342.0	352.7
348	267.4	286.8	303.8	318.7	332.0	343.9	354.7
350	269.0	288.5	305.5	320.5	333.9	345.9	356.7
352	270.5	290.1	307.3	322.4	335.8	347.9	358.8
354	272.0	291.8	309.0	324.2	337.7	349.9	360.8
356	273.6	293.4	310.8	326.0	339.6	351.8	362.8
358	275.1	295.1	312.5	327.9	341.5	353.8	364.9

Equation Used:
DBH=DSIB+0.064571*DSIB*(2.3-SH)+0.534355*DSIB*Ln((SH+1.0)/2.3)
Based on 1285 Trees. Standard Error of Estimated DBH = 4.68 cm

TABLE 9 **Stump and Breast Height Diameter Tables for: Western Hemlock** all ages in **Forest Inventory Zones D to L**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.7	9.1	9.5	9.9	10.2	10.4	10.7
12	10.4	11.0	11.4	11.9	12.2	12.5	12.8
14	12.1	12.8	13.3	13.8	14.3	14.6	15.0
16	13.9	14.6	15.3	15.8	16.3	16.7	17.1
18	15.6	16.4	17.2	17.8	18.3	18.8	19.2
20	17.3	18.3	19.1	19.8	20.4	20.9	21.4
22	19.1	20.1	21.0	21.7	22.4	23.0	23.5
24	20.8	21.9	22.9	23.7	24.4	25.1	25.6
26	22.5	23.8	24.8	25.7	26.5	27.2	27.8
28	24.3	25.6	26.7	27.7	28.5	29.2	29.9
30	26.0	27.4	28.6	29.6	30.5	31.3	32.0
32	27.7	29.2	30.5	31.6	32.6	33.4	34.2
34	29.5	31.1	32.4	33.6	34.6	35.5	36.3
36	31.2	32.9	34.3	35.6	36.7	37.6	38.4
38	32.9	34.7	36.2	37.5	38.7	39.7	40.6
40	34.7	36.5	38.1	39.5	40.7	41.8	42.7
42	36.4	38.4	40.0	41.5	42.8	43.9	44.9
44	38.1	40.2	42.0	43.5	44.8	46.0	47.0
46	39.9	42.0	43.9	45.5	46.8	48.1	49.1
48	41.6	43.8	45.8	47.4	48.9	50.1	51.3
50	43.3	45.7	47.7	49.4	50.9	52.2	53.4
52	45.1	47.5	49.6	51.4	52.9	54.3	55.5
54	46.8	49.3	51.5	53.4	55.0	56.4	57.7
56	48.5	51.2	53.4	55.3	57.0	58.5	59.8
58	50.3	53.0	55.3	57.3	59.1	60.6	61.9
60	52.0	54.8	57.2	59.3	61.1	62.7	64.1
62	53.7	56.6	59.1	61.3	63.1	64.8	66.2
64	55.5	58.5	61.0	63.2	65.2	66.9	68.3
66	57.2	60.3	62.9	65.2	67.2	68.9	70.5
68	58.9	62.1	64.8	67.2	69.2	71.0	72.6
70	60.7	63.9	66.7	69.2	71.3	73.1	74.8
72	62.4	65.8	68.7	71.1	73.3	75.2	76.9
74	64.1	67.6	70.6	73.1	75.3	77.3	79.0
76	65.9	69.4	72.5	75.1	77.4	79.4	81.2
78	67.6	71.3	74.4	77.1	79.4	81.5	83.3

Equation Used:
DBH=DSIB+0.100771*DSIB*(2.3-SH)+0.504787*DSIB*Ln((SH+1.0)/2.3)
Based on 1828 Trees. Standard Error of Estimated DBH = 2.94 cm

TABLE 9 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	69.3	73.1	76.3	79.0	81.5	83.6	85.4
82	71.1	74.9	78.2	81.0	83.5	85.7	87.6
84	72.8	76.7	80.1	83.0	85.5	87.7	89.7
86	74.5	78.6	82.0	85.0	87.6	89.8	91.8
88	76.3	80.4	83.9	87.0	89.6	91.9	94.0
90	78.0	82.2	85.8	88.9	91.6	94.0	96.1
92	79.7	84.0	87.7	90.9	93.7	96.1	98.2
94	81.5	85.9	89.6	92.9	95.7	98.2	100.4
96	83.2	87.7	91.5	94.9	97.8	100.3	102.5
98	84.9	89.5	93.4	96.8	99.8	102.4	104.7
100	86.7	91.4	95.4	98.8	101.8	104.5	106.8
102	88.4	93.2	97.3	100.8	103.9	106.6	108.9
104	90.1	95.0	99.2	102.8	105.9	108.6	111.1
106	91.9	96.8	101.1	104.7	107.9	110.7	113.2
108	93.6	98.7	103.0	106.7	110.0	112.8	115.3
110	95.3	100.5	104.9	108.7	112.0	114.9	117.5
112	97.1	102.3	106.8	110.7	114.0	117.0	119.6
114	98.8	104.1	108.7	112.6	116.1	119.1	121.7
116	100.5	106.0	110.6	114.6	118.1	121.2	123.9
118	102.3	107.8	112.5	116.6	120.2	123.3	126.0
120	104.0	109.6	114.4	118.6	122.2	125.4	128.1
122	105.7	111.5	116.3	120.6	124.2	127.4	130.3
124	107.5	113.3	118.2	122.5	126.3	129.5	132.4
126	109.2	115.1	120.1	124.5	128.3	131.6	134.6
128	110.9	116.9	122.1	126.5	130.3	133.7	136.7
130	112.7	118.8	124.0	128.5	132.4	135.8	138.8
132	114.4	120.6	125.9	130.4	134.4	137.9	141.0
134	116.1	122.4	127.8	132.4	136.4	140.0	143.1
136	117.9	124.2	129.7	134.4	138.5	142.1	145.2
138	119.6	126.1	131.6	136.4	140.5	144.2	147.4
140	121.3	127.9	133.5	138.3	142.6	146.2	149.5
142	123.1	129.7	135.4	140.3	144.6	148.3	151.6
144	124.8	131.5	137.3	142.3	146.6	150.4	153.8
146	126.5	133.4	139.2	144.3	148.7	152.5	155.9
148	128.3	135.2	141.1	146.2	150.7	154.6	158.0

TABLE 9 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	130.0	137.0	143.0	148.2	152.7	156.7	160.2
152	131.7	138.9	144.9	150.2	154.8	158.8	162.3
154	133.5	140.7	146.8	152.2	156.8	160.9	164.5
156	135.2	142.5	148.8	154.1	158.8	163.0	166.6
158	136.9	144.3	150.7	156.1	160.9	165.1	168.7
160	138.7	146.2	152.6	158.1	162.9	167.1	170.9
162	140.4	148.0	154.5	160.1	165.0	169.2	173.0
164	142.1	149.8	156.4	162.1	167.0	171.3	175.1
166	143.9	151.6	158.3	164.0	169.0	173.4	177.3
168	145.6	153.5	160.2	166.0	171.1	175.5	179.4
170	147.4	155.3	162.1	168.0	173.1	177.6	181.5
172	149.1	157.1	164.0	170.0	175.1	179.7	183.7
174	150.8	159.0	165.9	171.9	177.2	181.8	185.8
176	152.6	160.8	167.8	173.9	179.2	183.9	187.9
178	154.3	162.6	169.7	175.9	181.2	185.9	190.1
180	156.0	164.4	171.6	177.9	183.3	188.0	192.2
182	157.8	166.3	173.5	179.8	185.3	190.1	194.4
184	159.5	168.1	175.5	181.8	187.4	192.2	196.5
186	161.2	169.9	177.4	183.8	189.4	194.3	198.6
188	163.0	171.7	179.3	185.8	191.4	196.4	200.8
190	164.7	173.6	181.2	187.7	193.5	198.5	202.9
192	166.4	175.4	183.1	189.7	195.5	200.6	205.0
194	168.2	177.2	185.0	191.7	197.5	202.7	207.2
196	169.9	179.1	186.9	193.7	199.6	204.7	209.3
198	171.6	180.9	188.8	195.6	201.6	206.8	211.4
200	173.4	182.7	190.7	197.6	203.6	208.9	213.6
202	175.1	184.5	192.6	199.6	205.7	211.0	215.7
204	176.8	186.4	194.5	201.6	207.7	213.1	217.8
206	178.6	188.2	196.4	203.6	209.8	215.2	220.0
208	180.3	190.0	198.3	205.5	211.8	217.3	222.1
210	182.0	191.8	200.2	207.5	213.8	219.4	224.3
212	183.8	193.7	202.2	209.5	215.9	221.5	226.4
214	185.5	195.5	204.1	211.5	217.9	223.6	228.5
216	187.2	197.3	206.0	213.4	219.9	225.6	230.7
218	189.0	199.2	207.9	215.4	222.0	227.7	232.8

Equation Used:
DBH=DSIB+0.100771*DSIB*(2.3-SH)+0.504787*DSIB*Ln((SH+1.0)/2.3)
Based on 1828 Trees. Standard Error of Estimated DBH = 2.94 cm

TABLE 10 **Stump and Breast Height Diameter Tables for: Balsam Species all ages in Forest Inventory Zones A,B,C**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	7.3	7.9	8.4	8.9	9.3	9.7	10.1
12	8.7	9.5	10.1	10.7	11.2	11.7	12.1
14	10.2	11.0	11.8	12.5	13.1	13.6	14.1
16	11.6	12.6	13.5	14.2	14.9	15.5	16.1
18	13.1	14.2	15.2	16.0	16.8	17.5	18.1
20	14.5	15.8	16.8	17.8	18.6	19.4	20.1
22	16.0	17.3	18.5	19.6	20.5	21.4	22.1
24	17.4	18.9	20.2	21.4	22.4	23.3	24.1
26	18.9	20.5	21.9	23.1	24.2	25.2	26.2
28	20.3	22.1	23.6	24.9	26.1	27.2	28.2
30	21.8	23.6	25.3	26.7	28.0	29.1	30.2
32	23.2	25.2	26.9	28.5	29.8	31.1	32.2
34	24.7	26.8	28.6	30.3	31.7	33.0	34.2
36	26.1	28.4	30.3	32.0	33.6	35.0	36.2
38	27.6	29.9	32.0	33.8	35.4	36.9	38.2
40	29.1	31.5	33.7	35.6	37.3	38.8	40.2
42	30.5	33.1	35.4	37.4	39.2	40.8	42.2
44	32.0	34.7	37.0	39.1	41.0	42.7	44.3
46	33.4	36.2	38.7	40.9	42.9	44.7	46.3
48	34.9	37.8	40.4	42.7	44.8	46.6	48.3
50	36.3	39.4	42.1	44.5	46.6	48.5	50.3
52	37.8	41.0	43.8	46.3	48.5	50.5	52.3
54	39.2	42.6	45.5	48.0	50.4	52.4	54.3
56	40.7	44.1	47.2	49.8	52.2	54.4	56.3
58	42.1	45.7	48.8	51.6	54.1	56.3	58.3
60	43.6	47.3	50.5	53.4	55.9	58.3	60.4
62	45.0	48.9	52.2	55.2	57.8	60.2	62.4
64	46.5	50.4	53.9	56.9	59.7	62.1	64.4
66	47.9	52.0	55.6	58.7	61.5	64.1	66.4
68	49.4	53.6	57.3	60.5	63.4	66.0	68.4
70	50.8	55.2	58.9	62.3	65.3	68.0	70.4
72	52.3	56.7	60.6	64.1	67.1	69.9	72.4
74	53.8	58.3	62.3	65.8	69.0	71.9	74.4
76	55.2	59.9	64.0	67.6	70.9	73.8	76.4
78	56.7	61.5	65.7	69.4	72.7	75.7	78.5

Equation Used:
DBH=DSIB+0.057484*DSIB*(2.3-SH)+0.573054*DSIB*Ln((SH+1.0)/2.3)
Based on 820 Trees. Standard Error of Estimated DBH = 4.84 cm

TABLE 10 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	58.1	63.0	67.4	71.2	74.6	77.7	80.5
82	59.6	64.6	69.0	73.0	76.5	79.6	82.5
84	61.0	66.2	70.7	74.7	78.3	81.6	84.5
86	62.5	67.8	72.4	76.5	80.2	83.5	86.5
88	63.9	69.3	74.1	78.3	82.1	85.4	88.5
90	65.4	70.9	75.8	80.1	83.9	87.4	90.5
92	66.8	72.5	77.5	81.9	85.8	89.3	92.5
94	68.3	74.1	79.1	83.6	87.7	91.3	94.6
96	69.7	75.6	80.8	85.4	89.5	93.2	96.6
98	71.2	77.2	82.5	87.2	91.4	95.2	98.6
100	72.6	78.8	84.2	89.0	93.2	97.1	100.6
102	74.1	80.4	85.9	90.8	95.1	99.0	102.6
104	75.5	82.0	87.6	92.5	97.0	101.0	104.6
106	77.0	83.5	89.2	94.3	98.8	102.9	106.6
108	78.4	85.1	90.9	96.1	100.7	104.9	108.6
110	79.9	86.7	92.6	97.9	102.6	106.8	110.7
112	81.4	88.3	94.3	99.7	104.4	108.8	112.7
114	82.8	89.8	96.0	101.4	106.3	110.7	114.7
116	84.3	91.4	97.7	103.2	108.2	112.6	116.7
118	85.7	93.0	99.4	105.0	110.0	114.6	118.7
120	87.2	94.6	101.0	106.8	111.9	116.5	120.7
122	88.6	96.1	102.7	108.6	113.8	118.5	122.7
124	90.1	97.7	104.4	110.3	115.6	120.4	124.7
126	91.5	99.3	106.1	112.1	117.5	122.3	126.7
128	93.0	100.9	107.8	113.9	119.4	124.3	128.8
130	94.4	102.4	109.5	115.7	121.2	126.2	130.8
132	95.9	104.0	111.1	117.4	123.1	128.2	132.8
134	97.3	105.6	112.8	119.2	125.0	130.1	134.8
136	98.8	107.2	114.5	121.0	126.8	132.1	136.8
138	100.2	108.7	116.2	122.8	128.7	134.0	138.8
140	101.7	110.3	117.9	124.6	130.5	135.9	140.8
142	103.1	111.9	119.6	126.3	132.4	137.9	142.8
144	104.6	113.5	121.2	128.1	134.3	139.8	144.9
146	106.1	115.1	122.9	129.9	136.1	141.8	146.9
148	107.5	116.6	124.6	131.7	138.0	143.7	148.9

TABLE 10 (Concluded)

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	109.0	118.2	126.3	133.5	139.9	145.6	150.9
152	110.4	119.8	128.0	135.2	141.7	147.6	152.9
154	111.9	121.4	129.7	137.0	143.6	149.5	154.9
156	113.3	122.9	131.3	138.8	145.5	151.5	156.9
158	114.8	124.5	133.0	140.6	147.3	153.4	158.9
160	116.2	126.1	134.7	142.4	149.2	155.4	160.9
162	117.7	127.7	136.4	144.1	151.1	157.3	163.0
164	119.1	129.2	138.1	145.9	152.9	159.2	165.0
166	120.6	130.8	139.8	147.7	154.8	161.2	167.0
168	122.0	132.4	141.5	149.5	156.7	163.1	169.0
170	123.5	134.0	143.1	151.3	158.5	165.1	171.0
172	124.9	135.5	144.8	153.0	160.4	167.0	173.0
174	126.4	137.1	146.5	154.8	162.3	169.0	175.0
176	127.8	138.7	148.2	156.6	164.1	170.9	177.0
178	129.3	140.3	149.9	158.4	166.0	172.8	179.1
180	130.7	141.8	151.6	160.2	167.8	174.8	181.1
182	132.2	143.4	153.2	161.9	169.7	176.7	183.1
184	133.7	145.0	154.9	163.7	171.6	178.7	185.1
186	135.1	146.6	156.6	165.5	173.4	180.6	187.1
188	136.6	148.1	158.3	167.3	175.3	182.5	189.1
190	138.0	149.7	160.0	169.1	177.2	184.5	191.1
192	139.5	151.3	161.7	170.8	179.0	186.4	193.1
194	140.9	152.9	163.3	172.6	180.9	188.4	195.1
196	142.4	154.5	165.0	174.4	182.8	190.3	197.2
198	143.8	156.0	166.7	176.2	184.6	192.3	199.2
200	145.3	157.6	168.4	178.0	186.5	194.2	201.2
202	146.7	159.2	170.1	179.7	188.4	196.1	203.2
204	148.2	160.8	171.8	181.5	190.2	198.1	205.2
206	149.6	162.3	173.4	183.3	192.1	200.0	207.2
208	151.1	163.9	175.1	185.1	194.0	202.0	209.2
210	152.5	165.5	176.8	186.8	195.8	203.9	211.2
212	154.0	167.1	178.5	188.6	197.7	205.9	213.3
214	155.4	168.6	180.2	190.4	199.6	207.8	215.3
216	156.9	170.2	181.9	192.2	201.4	209.7	217.3
218	158.4	171.8	183.5	194.0	203.3	211.7	219.3

EQUATION USED:
DBH=DSIB+0.057484*DSIB*(2.3-SH)+0.573054*DSIB*Ln((SH+1.0)/2.3)
Based on 820 Trees. Standard Error of Estimated DBH = 4.84 cm

TABLE 11 **Stump and Breast Height Diameter Tables for: Balsam Species all ages in Forest Inventory Zones D to J**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.3	8.7	9.2	9.5	9.8	10.1	10.4
12	9.9	10.5	11.0	11.4	11.8	12.1	12.4
14	11.6	12.2	12.8	13.3	13.8	14.2	14.5
16	13.2	14.0	14.7	15.2	15.7	16.2	16.6
18	14.9	15.7	16.5	17.1	17.7	18.2	18.7
20	16.5	17.5	18.3	19.0	19.7	20.2	20.7
22	18.2	19.2	20.2	20.9	21.6	22.3	22.8
24	19.9	21.0	22.0	22.8	23.6	24.3	24.9
26	21.5	22.7	23.8	24.7	25.6	26.3	27.0
28	23.2	24.5	25.6	26.7	27.5	28.3	29.0
30	24.8	26.2	27.5	28.6	29.5	30.4	31.1
32	26.5	28.0	29.3	30.5	31.5	32.4	33.2
34	28.1	29.7	31.1	32.4	33.4	34.4	35.3
36	29.8	31.5	33.0	34.3	35.4	36.4	37.3
38	31.4	33.2	34.8	36.2	37.4	38.5	39.4
40	33.1	35.0	36.6	38.1	39.3	40.5	41.5
42	34.7	36.7	38.5	40.0	41.3	42.5	43.6
44	36.4	38.5	40.3	41.9	43.3	44.5	45.6
46	38.1	40.2	42.1	43.8	45.2	46.5	47.7
48	39.7	42.0	44.0	45.7	47.2	48.6	49.8
50	41.4	43.7	45.8	47.6	49.2	50.6	51.9
52	43.0	45.5	47.6	49.5	51.1	52.6	53.9
54	44.7	47.2	49.5	51.4	53.1	54.6	56.0
56	46.3	49.0	51.3	53.3	55.1	56.7	58.1
58	48.0	50.7	53.1	55.2	57.1	58.7	60.2
60	49.6	52.5	55.0	57.1	59.0	60.7	62.2
62	51.3	54.2	56.8	59.0	61.0	62.7	64.3
64	52.9	56.0	58.6	60.9	63.0	64.8	66.4
66	54.6	57.7	60.5	62.8	64.9	66.8	68.4
68	56.3	59.5	62.3	64.7	66.9	68.8	70.5
70	57.9	61.2	64.1	66.6	68.9	70.8	72.6
72	59.6	63.0	65.9	68.5	70.8	72.9	74.7
74	61.2	64.7	67.8	70.4	72.8	74.9	76.7
76	62.9	66.5	69.6	72.3	74.8	76.9	78.8
78	64.5	68.2	71.4	74.2	76.7	78.9	80.9

Equation Used:
DBH=DSIB+0.073625*DSIB*(2.3-SH)+0.477491*DSIB*Ln((SH+1.0)/2.3)
Based on 3980 Trees. Standard Error of Estimated DBH = 2.02 cm

TABLE 11 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	66.2	70.0	73.3	76.2	78.7	80.9	83.0
82	67.8	71.7	75.1	78.1	80.7	83.0	85.0
84	69.5	73.5	76.9	80.0	82.6	85.0	87.1
86	71.1	75.2	78.8	81.9	84.6	87.0	89.2
88	72.8	77.0	80.6	83.8	86.6	89.0	91.3
90	74.5	78.7	82.4	85.7	88.5	91.1	93.3
92	76.1	80.5	84.3	87.6	90.5	93.1	95.4
94	77.8	82.2	86.1	89.5	92.5	95.1	97.5
96	79.4	84.0	87.9	91.4	94.4	97.1	99.6
98	81.1	85.7	89.8	93.3	96.4	99.2	101.6
100	82.7	87.5	91.6	95.2	98.4	101.2	103.7
102	84.4	89.2	93.4	97.1	100.3	103.2	105.8
104	86.0	91.0	95.3	99.0	102.3	105.2	107.9
106	87.7	92.7	97.1	100.9	104.3	107.3	109.9
108	89.4	94.5	98.9	102.8	106.2	109.3	112.0
110	91.0	96.2	100.8	104.7	108.2	111.3	114.1
112	92.7	98.0	102.6	106.6	110.2	113.3	116.2
114	94.3	99.7	104.4	108.5	112.1	115.4	118.2
116	96.0	101.5	106.2	110.4	114.1	117.4	120.3
118	97.6	103.2	108.1	112.3	116.1	119.4	122.4
120	99.3	105.0	109.9	114.2	118.0	121.4	124.5
122	100.9	106.7	111.7	116.1	120.0	123.4	126.5
124	102.6	108.5	113.6	118.0	122.0	125.5	128.6
126	104.2	110.2	115.4	119.9	123.9	127.5	130.7
128	105.9	112.0	117.2	121.8	125.9	129.5	132.7
130	107.6	113.7	119.1	123.7	127.9	131.5	134.8
132	109.2	115.5	120.9	125.6	129.8	133.6	136.9
134	110.9	117.2	122.7	127.6	131.8	135.6	139.0
136	112.5	119.0	124.6	129.5	133.8	137.6	141.0
138	114.2	120.7	126.4	131.4	135.7	139.6	143.1
140	115.8	122.5	128.2	133.3	137.7	141.7	145.2
142	117.5	124.2	130.1	135.2	139.7	143.7	147.3
144	119.1	126.0	131.9	137.1	141.6	145.7	149.3
146	120.8	127.7	133.7	139.0	143.6	147.7	151.4
148	122.4	129.5	135.6	140.9	145.6	149.8	153.5

TABLE 11 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	124.1	131.2	137.4	142.8	147.5	151.8	155.6
152	125.8	133.0	139.2	144.7	149.5	153.8	157.6
154	127.4	134.7	141.1	146.6	151.5	155.8	159.7
156	129.1	136.5	142.9	148.5	153.4	157.8	161.8
158	130.7	138.2	144.7	150.4	155.4	159.9	163.9
160	132.4	140.0	146.5	152.3	157.4	161.9	165.9
162	134.0	141.7	148.4	154.2	159.3	163.9	168.0
164	135.7	143.5	150.2	156.1	161.3	165.9	170.1
166	137.3	145.2	152.0	158.0	163.3	168.0	172.2
168	139.0	147.0	153.9	159.9	165.2	170.0	174.2
170	140.6	148.7	155.7	161.8	167.2	172.0	176.3
172	142.3	150.5	157.5	163.7	169.2	174.0	178.4
174	144.0	152.2	159.4	165.6	171.2	176.1	180.5
176	145.6	154.0	161.2	167.5	173.1	178.1	182.5
178	147.3	155.7	163.0	169.4	175.1	180.1	184.6
180	148.9	157.5	164.9	171.3	177.1	182.1	186.7
182	150.6	159.2	166.7	173.2	179.0	184.2	188.7
184	152.2	161.0	168.5	175.1	181.0	186.2	190.8
186	153.9	162.7	170.4	177.0	183.0	188.2	192.9
188	155.5	164.5	172.2	179.0	184.9	190.2	195.0
190	157.2	166.2	174.0	180.9	186.9	192.3	197.0
192	158.8	168.0	175.9	182.8	188.9	194.3	199.1
194	160.5	169.7	177.7	184.7	190.8	196.3	201.2
196	162.2	171.5	179.5	186.6	192.8	198.3	203.3
198	163.8	173.2	181.4	188.5	194.8	200.3	205.3
200	165.5	175.0	183.2	190.4	196.7	202.4	207.4
202	167.1	176.7	185.0	192.3	198.7	204.4	209.5
204	168.8	178.5	186.8	194.2	200.7	206.4	211.6
206	170.4	180.2	188.7	196.1	202.6	208.4	213.6
208	172.1	182.0	190.5	198.0	204.6	210.5	215.7
210	173.7	183.7	192.3	199.9	206.6	212.5	217.8
212	175.4	185.5	194.2	201.8	208.5	214.5	219.9
214	177.0	187.2	196.0	203.7	210.5	216.5	221.9
216	178.7	189.0	197.8	205.6	212.5	218.6	224.0
218	180.4	190.7	199.7	207.5	214.4	220.6	226.1

Equation Used:
DBH=DSIB+0.073625*DSIB*(2.3-SH)+0.477491*DSIB*Ln((SH+1.0)/2.3)
Based on 3980 Trees. Standard Error of Estimated DBH = 2.02 cm

TABLE 12 **Stump and Breast Height Diameter Tables for: Balsam Species** all ages in **Forest Inventory Zones K and L**

Diameter Breast Height Outside Bark in cm							
DSIB	**Stump Height in m**						
(cm)	**0.15**	**0.30**	**0.45**	**0.60**	**0.75**	**0.90**	**1.05**
10	8.6	9.0	9.4	9.7	10.0	10.2	10.4
12	10.3	10.8	11.2	11.6	12.0	12.2	12.5
14	12.0	12.6	13.1	13.6	13.9	14.3	14.6
16	13.7	14.4	15.0	15.5	15.9	16.3	16.7
18	15.5	16.2	16.9	17.4	17.9	18.4	18.8
20	17.2	18.0	18.7	19.4	19.9	20.4	20.8
22	18.9	19.8	20.6	21.3	21.9	22.4	22.9
24	20.6	21.6	22.5	23.2	23.9	24.5	25.0
26	22.3	23.4	24.4	25.2	25.9	26.5	27.1
28	24.0	25.2	26.2	27.1	27.9	28.6	29.2
30	25.8	27.0	28.1	29.0	29.9	30.6	31.3
32	27.5	28.8	30.0	31.0	31.9	32.6	33.3
34	29.2	30.6	31.8	32.9	33.9	34.7	35.4
36	30.9	32.4	33.7	34.9	35.9	36.7	37.5
38	32.6	34.2	35.6	36.8	37.8	38.8	39.6
40	34.4	36.0	37.5	38.7	39.8	40.8	41.7
42	36.1	37.8	39.3	40.7	41.8	42.9	43.8
44	37.8	39.6	41.2	42.6	43.8	44.9	45.9
46	39.5	41.4	43.1	44.5	45.8	46.9	47.9
48	41.2	43.2	45.0	46.5	47.8	49.0	50.0
50	42.9	45.0	46.8	48.4	49.8	51.0	52.1
52	44.7	46.8	48.7	50.3	51.8	53.1	54.2
54	46.4	48.6	50.6	52.3	53.8	55.1	56.3
56	48.1	50.4	52.5	54.2	55.8	57.1	58.4
58	49.8	52.2	54.3	56.2	57.8	59.2	60.4
60	51.5	54.0	56.2	58.1	59.8	61.2	62.5
62	53.2	55.8	58.1	60.0	61.7	63.3	64.6
64	55.0	57.6	60.0	62.0	63.7	65.3	66.7
66	56.7	59.4	61.8	63.9	65.7	67.3	68.8
68	58.4	61.2	63.7	65.8	67.7	69.4	70.9
70	60.1	63.0	65.6	67.8	69.7	71.4	72.9
72	61.8	64.8	67.4	69.7	71.7	73.5	75.0
74	63.5	66.6	69.3	71.6	73.7	75.5	77.1
76	65.3	68.4	71.2	73.6	75.7	77.5	79.2
78	67.0	70.3	73.1	75.5	77.7	79.6	81.3

Equation Used:
DBH=DSIB+0.073358*DSIB*(2.3-SH)+0.431277*DSIB*Ln((SH+1.0)/2.3)
Based on 579 Trees. Standard Error of Estimated DBH = 1.24 cm

TABLE 12 (Continued)

Diameter Breast Height Outside Bark in cm							
DSIB	**Stump Height in m**						
(cm)	**0.15**	**0.30**	**0.45**	**0.60**	**0.75**	**0.90**	**1.05**
80	68.7	72.1	74.9	77.5	79.7	81.6	83.4
82	70.4	73.9	76.8	79.4	81.7	83.7	85.4
84	72.1	75.7	78.7	81.3	83.7	85.7	87.5
86	73.9	77.5	80.6	83.3	85.6	87.7	89.6
88	75.6	79.3	82.4	85.2	87.6	89.8	91.7
90	77.3	81.1	84.3	87.1	89.6	91.8	93.8
92	79.0	82.9	86.2	89.1	91.6	93.9	95.9
94	80.7	84.7	88.1	91.0	93.6	95.9	98.0
96	82.4	86.5	89.9	92.9	95.6	97.9	100.0
98	84.2	88.3	91.8	94.9	97.6	100.0	102.1
100	85.9	90.1	93.7	96.8	99.6	102.0	104.2
102	87.6	91.9	95.5	98.8	101.6	104.1	106.3
104	89.3	93.7	97.4	100.7	103.6	106.1	108.4
106	91.0	95.5	99.3	102.6	105.6	108.2	110.5
108	92.7	97.3	101.2	104.6	107.6	110.2	112.5
110	94.5	99.1	103.0	106.5	109.5	112.2	114.6
112	96.2	100.9	104.9	108.4	111.5	114.3	116.7
114	97.9	102.7	106.8	110.4	113.5	116.3	118.8
116	99.6	104.5	108.7	112.3	115.5	118.4	120.9
118	101.3	106.3	110.5	114.2	117.5	120.4	123.0
120	103.1	108.1	112.4	116.2	119.5	122.4	125.0
122	104.8	109.9	114.3	118.1	121.5	124.5	127.1
124	106.5	111.7	116.2	120.1	123.5	126.5	129.2
126	108.2	113.5	118.0	122.0	125.5	128.6	131.3
128	109.9	115.3	119.9	123.9	127.5	130.6	133.4
130	111.6	117.1	121.8	125.9	129.5	132.6	135.5
132	113.4	118.9	123.7	127.8	131.5	134.7	137.6
134	115.1	120.7	125.5	129.7	133.4	136.7	139.6
136	116.8	122.5	127.4	131.7	135.4	138.8	141.7
138	118.5	124.3	129.3	133.6	137.4	140.8	143.8
140	120.2	126.1	131.1	135.5	139.4	142.8	145.9
142	121.9	127.9	133.0	137.5	141.4	144.9	148.0
144	123.7	129.7	134.9	139.4	143.4	146.9	150.1
146	125.4	131.5	136.8	141.4	145.4	149.0	152.1
148	127.1	133.3	138.6	143.3	147.4	151.0	154.2

TABLE 12 (Concluded)

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	128.8	135.1	140.5	145.2	149.4	153.0	156.3
152	130.5	136.9	142.4	147.2	151.4	155.1	158.4
154	132.3	138.7	144.3	149.1	153.4	157.1	160.5
156	134.0	140.5	146.1	151.0	155.4	159.2	162.6
158	135.7	142.3	148.0	153.0	157.3	161.2	164.6
160	137.4	144.1	149.9	154.9	159.3	163.2	166.7
162	139.1	145.9	151.8	156.8	161.3	165.3	168.8
164	140.8	147.7	153.6	158.8	163.3	167.3	170.9
166	142.6	149.5	155.5	160.7	165.3	169.4	173.0
168	144.3	151.3	157.4	162.7	167.3	171.4	175.1
170	146.0	153.1	159.2	164.6	169.3	173.5	177.2
172	147.7	154.9	161.1	166.5	171.3	175.5	179.2
174	149.4	156.7	163.0	168.5	173.3	177.5	181.3
176	151.1	158.5	164.9	170.4	175.3	179.6	183.4
178	152.9	160.3	166.7	172.3	177.3	181.6	185.5
180	154.6	162.1	168.6	174.3	179.3	183.7	187.6
182	156.3	163.9	170.5	176.2	181.2	185.7	189.7
184	158.0	165.7	172.4	178.1	183.2	187.7	191.7
186	159.7	167.5	174.2	180.1	185.2	189.8	193.8
188	161.5	169.3	176.1	182.0	187.2	191.8	195.9
190	163.2	171.1	178.0	184.0	189.2	193.9	198.0
192	164.9	172.9	179.9	185.9	191.2	195.9	200.1
194	166.6	174.7	181.7	187.8	193.2	197.9	202.2
196	168.3	176.5	183.6	189.8	195.2	200.0	204.2
198	170.0	178.3	185.5	191.7	197.2	202.0	206.3
200	171.8	180.1	187.3	193.6	199.2	204.1	208.4
202	173.5	181.9	189.2	195.6	201.2	206.1	210.5
204	175.2	183.7	191.1	197.5	203.2	208.1	212.6
206	176.9	185.5	193.0	199.4	205.1	210.2	214.7
208	178.6	187.3	194.8	201.4	207.1	212.2	216.8
210	180.3	189.1	196.7	203.3	209.1	214.3	218.8
212	182.1	190.9	198.6	205.3	211.1	216.3	220.9
214	183.8	192.7	200.5	207.2	213.1	218.3	223.0
216	185.5	194.5	202.3	209.1	215.1	220.4	225.1
218	187.2	196.3	204.2	211.1	217.1	222.4	227.2

Equation Used:
DBH=DSIB+0.073358*DSIB*(2.3-SH)+0.431277*DSIB*Ln((SH+1.0)/2.3)
Based on 579 Trees. Standard Error of Estimated DBH = 1.24 cm

TABLE 13 **Stump and Breast Height Diameter Tables for: Immature Sitka Spruce** up to 120 **Years in Forest Inventory Zones A,B,C**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	7.0	7.6	8.2	8.7	9.1	9.5	9.9
12	8.4	9.1	9.8	10.4	11.0	11.4	11.9
14	9.8	10.7	11.5	12.2	12.8	13.4	13.9
16	11.2	12.2	13.1	13.9	14.6	15.3	15.9
18	12.6	13.7	14.7	15.6	16.4	17.2	17.8
20	14.0	15.2	16.4	17.4	18.3	19.1	19.8
22	15.3	16.8	18.0	19.1	20.1	21.0	21.8
24	16.7	18.3	19.6	20.8	21.9	22.9	23.8
26	18.1	19.8	21.3	22.6	23.7	24.8	25.8
28	19.5	21.3	22.9	24.3	25.6	26.7	27.8
30	20.9	22.9	24.5	26.0	27.4	28.6	29.7
32	22.3	24.4	26.2	27.8	29.2	30.5	31.7
34	23.7	25.9	27.8	29.5	31.1	32.4	33.7
36	25.1	27.4	29.5	31.3	32.9	34.3	35.7
38	26.5	28.9	31.1	33.0	34.7	36.3	37.7
40	27.9	30.5	32.7	34.7	36.5	38.2	39.6
42	29.3	32.0	34.4	36.5	38.4	40.1	41.6
44	30.7	33.5	36.0	38.2	40.2	42.0	43.6
46	32.1	35.0	37.6	39.9	42.0	43.9	45.6
48	33.5	36.6	39.3	41.7	43.8	45.8	47.6
50	34.9	38.1	40.9	43.4	45.7	47.7	49.6
52	36.3	39.6	42.5	45.1	47.5	49.6	51.5
54	37.7	41.1	44.2	46.9	49.3	51.5	53.5
56	39.1	42.7	45.8	48.6	51.1	53.4	55.5
58	40.5	44.2	47.4	50.4	53.0	55.3	57.5
60	41.9	45.7	49.1	52.1	54.8	57.2	59.5
62	43.2	47.2	50.7	53.8	56.6	59.1	61.5
64	44.6	48.7	52.4	55.6	58.4	61.1	63.4
66	46.0	50.3	54.0	57.3	60.3	63.0	65.4
68	47.4	51.8	55.6	59.0	62.1	64.9	67.4
70	48.8	53.3	57.3	60.8	63.9	66.8	69.4
72	50.2	54.8	58.9	62.5	65.8	68.7	71.4
74	51.6	56.4	60.5	64.2	67.6	70.6	73.3
76	53.0	57.9	62.2	66.0	69.4	72.5	75.3
78	54.4	59.4	63.8	67.7	71.2	74.4	77.3

Equation Used:
DBH=DSIB+0.046301*DSIB*(2.3-SH)+0.580005*DSIB*Ln((SH+1.0)/2.3)
Based on 318 Trees. Standard Error of Estimated DBH = 4.23 cm

TABLE 13 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	55.8	60.9	65.4	69.5	73.1	76.3	79.3
82	57.2	62.5	67.1	71.2	74.9	78.2	81.3
84	58.6	64.0	68.7	72.9	76.7	80.1	83.3
86	60.0	65.5	70.4	74.7	78.5	82.0	85.2
88	61.4	67.0	72.0	76.4	80.4	84.0	87.2
90	62.8	68.6	73.6	78.1	82.2	85.9	89.2
92	64.2	70.1	75.3	79.9	84.0	87.8	91.2
94	65.6	71.6	76.9	81.6	85.8	89.7	93.2
96	67.0	73.1	78.5	83.3	87.7	91.6	95.1
98	68.4	74.6	80.2	85.1	89.5	93.5	97.1
100	69.8	76.2	81.8	86.8	91.3	95.4	99.1
102	71.1	77.7	83.4	88.6	93.2	97.3	101.1
104	72.5	79.2	85.1	90.3	95.0	99.2	103.1
106	73.9	80.7	86.7	92.0	96.8	101.1	105.1
108	75.3	82.3	88.4	93.8	98.6	103.0	107.0
110	76.7	83.8	90.0	95.5	100.5	104.9	109.0
112	78.1	85.3	91.6	97.2	102.3	106.8	111.0
114	79.5	86.8	93.3	99.0	104.1	108.8	113.0
116	80.9	88.4	94.9	100.7	105.9	110.7	115.0
118	82.3	89.9	96.5	102.5	107.8	112.6	117.0
120	83.7	91.4	98.2	104.2	109.6	114.5	118.9
122	85.1	92.9	99.8	105.9	111.4	116.4	120.9
124	86.5	94.4	101.4	107.7	113.2	118.3	122.9
126	87.9	96.0	103.1	109.4	115.1	120.2	124.9
128	89.3	97.5	104.7	111.1	116.9	122.1	126.9
130	90.7	99.0	106.3	112.9	118.7	124.0	128.8
132	92.1	100.5	108.0	114.6	120.5	125.9	130.8
134	93.5	102.1	109.6	116.3	122.4	127.8	132.8
136	94.9	103.6	111.3	118.1	124.2	129.7	134.8
138	96.3	105.1	112.9	119.8	126.0	131.7	136.8
140	97.7	106.6	114.5	121.6	127.9	133.6	138.8
142	99.0	108.2	116.2	123.3	129.7	135.5	140.7
144	100.4	109.7	117.8	125.0	131.5	137.4	142.7
146	101.8	111.2	119.4	126.8	133.3	139.3	144.7
148	103.2	112.7	121.1	128.5	135.2	141.2	146.7

TABLE 13 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	104.6	114.3	122.7	130.2	137.0	143.1	148.7
152	106.0	115.8	124.3	132.0	138.8	145.0	150.7
154	107.4	117.3	126.0	133.7	140.6	146.9	152.6
156	108.8	118.8	127.6	135.4	142.5	148.8	154.6
158	110.2	120.3	129.3	137.2	144.3	150.7	156.6
160	111.6	121.9	130.9	138.9	146.1	152.6	158.6
162	113.0	123.4	132.5	140.7	147.9	154.5	160.6
164	114.4	124.9	134.2	142.4	149.8	156.5	162.5
166	115.8	126.4	135.8	144.1	151.6	158.4	164.5
168	117.2	128.0	137.4	145.9	153.4	160.3	166.5
170	118.6	129.5	139.1	147.6	155.3	162.2	168.5
172	120.0	131.0	140.7	149.3	157.1	164.1	170.5
174	121.4	132.5	142.3	151.1	158.9	166.0	172.5
176	122.8	134.1	144.0	152.8	160.7	167.9	174.4
178	124.2	135.6	145.6	154.5	162.6	169.8	176.4
180	125.6	137.1	147.3	156.3	164.4	171.7	178.4
182	126.9	138.6	148.9	158.0	166.2	173.6	180.4
184	128.3	140.1	150.5	159.8	168.0	175.5	182.4
186	129.7	141.7	152.2	161.5	169.9	177.4	184.4
188	131.1	143.2	153.8	163.2	171.7	179.4	186.3
190	132.5	144.7	155.4	165.0	173.5	181.3	188.3
192	133.9	146.2	157.1	166.7	175.3	183.2	190.3
194	135.3	147.8	158.7	168.4	177.2	185.1	192.3
196	136.7	149.3	160.3	170.2	179.0	187.0	194.3
198	138.1	150.8	162.0	171.9	180.8	188.9	196.2
200	139.5	152.3	163.6	173.6	182.7	190.8	198.2
202	140.9	153.9	165.3	175.4	184.5	192.7	200.2
204	142.3	155.4	166.9	177.1	186.3	194.6	202.2
206	143.7	156.9	168.5	178.9	188.1	196.5	204.2
208	145.1	158.4	170.2	180.6	190.0	198.4	206.2
210	146.5	160.0	171.8	182.3	191.8	200.3	208.1
212	147.9	161.5	173.4	184.1	193.6	202.2	210.1
214	149.3	163.0	175.1	185.8	195.4	204.2	212.1
216	150.7	164.5	176.7	187.5	197.3	206.1	214.1
218	152.1	166.0	178.3	189.3	199.1	208.0	216.1

Equation Used:
DBH=DSIB+0.046301*DSIB*(2.3-SH)+0.580005*DSIB*Ln((SH+1.0)/2.3)
Based on 318 Trees. Standard Error of Estimated DBH = 4.23 cm

TABLE 14 **Stump and Breast Height Diameter Tables for: Mature Sitka Spruce** over 120 Years in **Forest Inventory Zones A,B,C**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	6.8	7.4	7.9	8.4	8.9	9.3	9.7
12	8.1	8.9	9.5	10.1	10.7	11.1	11.6
14	9.5	10.4	11.1	11.8	12.4	13.0	13.5
16	10.8	11.8	12.7	13.5	14.2	14.9	15.4
18	12.2	13.3	14.3	15.2	16.0	16.7	17.4
20	13.6	14.8	15.9	16.9	17.8	18.6	19.3
22	14.9	16.3	17.5	18.6	19.5	20.4	21.2
24	16.3	17.7	19.1	20.2	21.3	22.3	23.2
26	17.6	19.2	20.7	21.9	23.1	24.1	25.1
28	19.0	20.7	22.2	23.6	24.9	26.0	27.0
30	20.3	22.2	23.8	25.3	26.6	27.8	29.0
32	21.7	23.7	25.4	27.0	28.4	29.7	30.9
34	23.0	25.1	27.0	28.7	30.2	31.6	32.8
36	24.4	26.6	28.6	30.4	32.0	33.4	34.8
38	25.7	28.1	30.2	32.0	33.7	35.3	36.7
40	27.1	29.6	31.8	33.7	35.5	37.1	38.6
42	28.5	31.1	33.4	35.4	37.3	39.0	40.5
44	29.8	32.5	34.9	37.1	39.1	40.8	42.5
46	31.2	34.0	36.5	38.8	40.8	42.7	44.4
48	32.5	35.5	38.1	40.5	42.6	44.6	46.3
50	33.9	37.0	39.7	42.2	44.4	46.4	48.3
52	35.2	38.5	41.3	43.9	46.2	48.3	50.2
54	36.6	39.9	42.9	45.5	47.9	50.1	52.1
56	37.9	41.4	44.5	47.2	49.7	52.0	54.1
58	39.3	42.9	46.1	48.9	51.5	53.8	56.0
60	40.7	44.4	47.7	50.6	53.3	55.7	57.9
62	42.0	45.8	49.2	52.3	55.0	57.5	59.9
64	43.4	47.3	50.8	54.0	56.8	59.4	61.8
66	44.7	48.8	52.4	55.7	58.6	61.3	63.7
68	46.1	50.3	54.0	57.3	60.4	63.1	65.6
70	47.4	51.8	55.6	59.0	62.1	65.0	67.6
72	48.8	53.2	57.2	60.7	63.9	66.8	69.5
74	50.1	54.7	58.8	62.4	65.7	68.7	71.4
76	51.5	56.2	60.4	64.1	67.5	70.5	73.4
78	52.9	57.7	62.0	65.8	69.2	72.4	75.3

Equation Used:
DBH=DSIB+0.021123*DSIB*(2.3-SH)+0.530663*DSIB*Ln((SH+1.0)/2.3)
Based on 354 Trees. Standard Error of Estimated DBH = 8.23 cm

TABLE 14 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	54.2	59.2	63.5	67.5	71.0	74.3	77.2
82	55.6	60.6	65.1	69.2	72.8	76.1	79.2
84	56.9	62.1	66.7	70.8	74.6	78.0	81.1
86	58.3	63.6	68.3	72.5	76.3	79.8	83.0
88	59.6	65.1	69.9	74.2	78.1	81.7	84.9
90	61.0	66.6	71.5	75.9	79.9	83.5	86.9
92	62.3	68.0	73.1	77.6	81.7	85.4	88.8
94	63.7	69.5	74.7	79.3	83.4	87.2	90.7
96	65.0	71.0	76.2	81.0	85.2	89.1	92.7
98	66.4	72.5	77.8	82.6	87.0	91.0	94.6
100	67.8	73.9	79.4	84.3	88.8	92.8	96.5
102	69.1	75.4	81.0	86.0	90.5	94.7	98.5
104	70.5	76.9	82.6	87.7	92.3	96.5	100.4
106	71.8	78.4	84.2	89.4	94.1	98.4	102.3
108	73.2	79.9	85.8	91.1	95.9	100.2	104.3
110	74.5	81.3	87.4	92.8	97.6	102.1	106.2
112	75.9	82.8	89.0	94.5	99.4	104.0	108.1
114	77.2	84.3	90.5	96.1	101.2	105.8	110.0
116	78.6	85.8	92.1	97.8	103.0	107.7	112.0
118	80.0	87.3	93.7	99.5	104.8	109.5	113.9
120	81.3	88.7	95.3	101.2	106.5	111.4	115.8
122	82.7	90.2	96.9	102.9	108.3	113.2	117.8
124	84.0	91.7	98.5	104.6	110.1	115.1	119.7
126	85.4	93.2	100.1	106.3	111.9	117.0	121.6
128	86.7	94.7	101.7	107.9	113.6	118.8	123.6
130	88.1	96.1	103.3	109.6	115.4	120.7	125.5
132	89.4	97.6	104.8	111.3	117.2	122.5	127.4
134	90.8	99.1	106.4	113.0	119.0	124.4	129.4
136	92.2	100.6	108.0	114.7	120.7	126.2	131.3
138	93.5	102.0	109.6	116.4	122.5	128.1	133.2
140	94.9	103.5	111.2	118.1	124.3	129.9	135.1
142	96.2	105.0	112.8	119.8	126.1	131.8	137.1
144	97.6	106.5	114.4	121.4	127.8	133.7	139.0
146	98.9	108.0	116.0	123.1	129.6	135.5	140.9
148	100.3	109.4	117.6	124.8	131.4	137.4	142.9

TABLE 14 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	101.6	110.9	119.1	126.5	133.2	139.2	144.8
152	103.0	112.4	120.7	128.2	134.9	141.1	146.7
154	104.3	113.9	122.3	129.9	136.7	142.9	148.7
156	105.7	115.4	123.9	131.6	138.5	144.8	150.6
158	107.1	116.8	125.5	133.2	140.3	146.7	152.5
160	108.4	118.3	127.1	134.9	142.0	148.5	154.5
162	109.8	119.8	128.7	136.6	143.8	150.4	156.4
164	111.1	121.3	130.3	138.3	145.6	152.2	158.3
166	112.5	122.8	131.8	140.0	147.4	154.1	160.2
168	113.8	124.2	133.4	141.7	149.1	155.9	162.2
170	115.2	125.7	135.0	143.4	150.9	157.8	164.1
172	116.5	127.2	136.6	145.1	152.7	159.6	166.0
174	117.9	128.7	138.2	146.7	154.5	161.5	168.0
176	119.3	130.1	139.8	148.4	156.2	163.4	169.9
178	120.6	131.6	141.4	150.1	158.0	165.2	171.8
180	122.0	133.1	143.0	151.8	159.8	167.1	173.8
182	123.3	134.6	144.6	153.5	161.6	168.9	175.7
184	124.7	136.1	146.1	155.2	163.3	170.8	177.6
186	126.0	137.5	147.7	156.9	165.1	172.6	179.6
188	127.4	139.0	149.3	158.5	166.9	174.5	181.5
190	128.7	140.5	150.9	160.2	168.7	176.4	183.4
192	130.1	142.0	152.5	161.9	170.4	178.2	185.3
194	131.5	143.5	154.1	163.6	172.2	180.1	187.3
196	132.8	144.9	155.7	165.3	174.0	181.9	189.2
198	134.2	146.4	157.3	167.0	175.8	183.8	191.1
200	135.5	147.9	158.9	168.7	177.5	185.6	193.1
202	136.9	149.4	160.4	170.4	179.3	187.5	195.0
204	138.2	150.9	162.0	172.0	181.1	189.4	196.9
206	139.6	152.3	163.6	173.7	182.9	191.2	198.9
208	140.9	153.8	165.2	175.4	184.6	193.1	200.8
210	142.3	155.3	166.8	177.1	186.4	194.9	202.7
212	143.6	156.8	168.4	178.8	188.2	196.8	204.7
214	145.0	158.2	170.0	180.5	190.0	198.6	206.6
216	146.4	159.7	171.6	182.2	191.7	200.5	208.5
218	147.7	161.2	173.1	183.8	193.5	202.3	210.4

Equation Used:
DBH=DSIB+0.021123*DSIB*(2.3-SH)+0.530663*DSIB*Ln((SH+1.0)/2.3)
Based on 354 Trees. Standard Error of Estimated DBH = 8.23 cm

TABLE 14 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
220	149.1	162.7	174.7	185.5	195.3	204.2	212.4
222	150.4	164.2	176.3	187.2	197.1	206.1	214.3
224	151.8	165.6	177.9	188.9	198.8	207.9	216.2
226	153.1	167.1	179.5	190.6	200.6	209.8	218.2
228	154.5	168.6	181.1	192.3	202.4	211.6	220.1
230	155.8	170.1	182.7	194.0	204.2	213.5	222.0
232	157.2	171.6	184.3	195.7	205.9	215.3	224.0
234	158.6	173.0	185.9	197.3	207.7	217.2	225.9
236	159.9	174.5	187.4	199.0	209.5	219.1	227.8
238	161.3	176.0	189.0	200.7	211.3	220.9	229.8
240	162.6	177.5	190.6	202.4	213.1	222.8	231.7
242	164.0	179.0	192.2	204.1	214.8	224.6	233.6
244	165.3	180.4	193.8	205.8	216.6	226.5	235.5
246	166.7	181.9	195.4	207.5	218.4	228.3	237.5
248	168.0	183.4	197.0	209.1	220.2	230.2	239.4
250	169.4	184.9	198.6	210.8	221.9	232.0	241.3
252	170.8	186.3	200.2	212.5	223.7	233.9	243.3
254	172.1	187.8	201.7	214.2	225.5	235.8	245.2
256	173.5	189.3	203.3	215.9	227.3	237.6	247.1
258	174.8	190.8	204.9	217.6	229.0	239.5	249.1
260	176.2	192.3	206.5	219.3	230.8	241.3	251.0
262	177.5	193.7	208.1	221.0	232.6	243.2	252.9
264	178.9	195.2	209.7	222.6	234.4	245.0	254.8
266	180.2	196.7	211.3	224.3	236.1	246.9	256.8
268	181.6	198.2	212.9	226.0	237.9	248.8	258.7
270	182.9	199.7	214.4	227.7	239.7	250.6	260.6
272	184.3	201.1	216.0	229.4	241.5	252.5	262.6
274	185.7	202.6	217.6	231.1	243.2	254.3	264.5
276	187.0	204.1	219.2	232.8	245.0	256.2	266.4
278	188.4	205.6	220.8	234.4	246.8	258.0	268.4
280	189.7	207.1	222.4	236.1	248.6	259.9	270.3
282	191.1	208.5	224.0	237.8	250.3	261.7	272.2
284	192.4	210.0	225.6	239.5	252.1	263.6	274.2
286	193.8	211.5	227.2	241.2	253.9	265.5	276.1
288	195.1	213.0	228.7	242.9	255.7	267.3	278.0

TABLE 14 (Concluded)

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
290	196.5	214.4	230.3	244.6	257.4	269.2	279.9
292	197.9	215.9	231.9	246.3	259.2	271.0	281.9
294	199.2	217.4	233.5	247.9	261.0	272.9	283.8
296	200.6	218.9	235.1	249.6	262.8	274.7	285.7
298	201.9	220.4	236.7	251.3	264.5	276.6	287.7
300	203.3	221.8	238.3	253.0	266.3	278.5	289.6
302	204.6	223.3	239.9	254.7	268.1	280.3	291.5
304	206.0	224.8	241.5	256.4	269.9	282.2	293.5
306	207.3	226.3	243.0	258.1	271.6	284.0	295.4
308	208.7	227.8	244.6	259.7	273.4	285.9	297.3
310	210.1	229.2	246.2	261.4	275.2	287.7	299.3
312	211.4	230.7	247.8	263.1	277.0	289.6	301.2
314	212.8	232.2	249.4	264.8	278.7	291.5	303.1
316	214.1	233.7	251.0	266.5	280.5	293.3	305.0
318	215.5	235.2	252.6	268.2	282.3	295.2	307.0
320	216.8	236.6	254.2	269.9	284.1	297.0	308.9
322	218.2	238.1	255.8	271.6	285.8	298.9	310.8
324	219.5	239.6	257.3	273.2	287.6	300.7	312.8
326	220.9	241.1	258.9	274.9	289.4	302.6	314.7
328	222.2	242.5	260.5	276.6	291.2	304.4	316.6
330	223.6	244.0	262.1	278.3	292.9	306.3	318.6
332	225.0	245.5	263.7	280.0	294.7	308.2	320.5
334	226.3	247.0	265.3	281.7	296.5	310.0	322.4
336	227.7	248.5	266.9	283.4	298.3	311.9	324.4
338	229.0	249.9	268.5	285.0	300.0	313.7	326.3
340	230.4	251.4	270.0	286.7	301.8	315.6	328.2
342	231.7	252.9	271.6	288.4	303.6	317.4	330.1
344	233.1	254.4	273.2	290.1	305.4	319.3	332.1
346	234.4	255.9	274.8	291.8	307.1	321.2	334.0
348	235.8	257.3	276.4	293.5	308.9	323.0	335.9
350	237.2	258.8	278.0	295.2	310.7	324.9	337.9
352	238.5	260.3	279.6	296.9	312.5	326.7	339.8
354	239.9	261.8	281.2	298.5	314.3	328.6	341.7
356	241.2	263.3	282.8	300.2	316.0	330.4	343.7
358	242.6	264.7	284.3	301.9	317.8	332.3	345.6

Equation Used:
DBH=DSIB+0.021123*DSIB*(2.3-SH)+0.530663*DSIB*Ln((SH+1.0)/2.3)
Based on 354 Trees. Standard Error of Estimated DBH = 8.23 cm

TABLE 15 **Stump and Breast Height Diameter Tables for: Spruce Species all ages in Forest Inventory Zones D to J**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	7.4	8.0	8.6	9.0	9.4	9.8	10.2
12	8.9	9.6	10.3	10.8	11.3	11.8	12.2
14	10.4	11.2	12.0	12.6	13.2	13.8	14.2
16	11.9	12.9	13.7	14.4	15.1	15.7	16.3
18	13.4	14.5	15.4	16.3	17.0	17.7	18.3
20	14.9	16.1	17.1	18.1	18.9	19.6	20.3
22	16.3	17.7	18.8	19.9	20.8	21.6	22.4
24	17.8	19.3	20.6	21.7	22.7	23.6	24.4
26	19.3	20.9	22.3	23.5	24.6	25.5	26.4
28	20.8	22.5	24.0	25.3	26.5	27.5	28.4
30	22.3	24.1	25.7	27.1	28.3	29.5	30.5
32	23.8	25.7	27.4	28.9	30.2	31.4	32.5
34	25.3	27.3	29.1	30.7	32.1	33.4	34.5
36	26.7	28.9	30.8	32.5	34.0	35.4	36.6
38	28.2	30.5	32.5	34.3	35.9	37.3	38.6
40	29.7	32.1	34.3	36.1	37.8	39.3	40.6
42	31.2	33.7	36.0	37.9	39.7	41.3	42.7
44	32.7	35.3	37.7	39.7	41.6	43.2	44.7
46	34.2	37.0	39.4	41.5	43.5	45.2	46.7
48	35.7	38.6	41.1	43.3	45.3	47.1	48.8
50	37.1	40.2	42.8	45.2	47.2	49.1	50.8
52	38.6	41.8	44.5	47.0	49.1	51.1	52.8
54	40.1	43.4	46.2	48.8	51.0	53.0	54.9
56	41.6	45.0	48.0	50.6	52.9	55.0	56.9
58	43.1	46.6	49.7	52.4	54.8	57.0	58.9
60	44.6	48.2	51.4	54.2	56.7	58.9	61.0
62	46.0	49.8	53.1	56.0	58.6	60.9	63.0
64	47.5	51.4	54.8	57.8	60.5	62.9	65.0
66	49.0	53.0	56.5	59.6	62.4	64.8	67.1
68	50.5	54.6	58.2	61.4	64.2	66.8	69.1
70	52.0	56.2	59.9	63.2	66.1	68.8	71.1
72	53.5	57.8	61.7	65.0	68.0	70.7	73.2
74	55.0	59.4	63.4	66.8	69.9	72.7	75.2
76	56.4	61.1	65.1	68.6	71.8	74.6	77.2
78	57.9	62.7	66.8	70.4	73.7	76.6	79.2

Equation Used:
DBH=DSIB+0.065728*DSIB*(2.3-SH)+0.575037*DSIB*Ln((SH+1.0)/2.3)
Based on 4569 Trees. Standard Error of Estimated DBH = 3.11 cm

TABLE 15 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	59.4	64.3	68.5	72.2	75.6	78.6	81.3
82	60.9	65.9	70.2	74.1	77.5	80.5	83.3
84	62.4	67.5	71.9	75.9	79.4	82.5	85.3
86	63.9	69.1	73.6	77.7	81.2	84.5	87.4
88	65.4	70.7	75.4	79.5	83.1	86.4	89.4
90	66.8	72.3	77.1	81.3	85.0	88.4	91.4
92	68.3	73.9	78.8	83.1	86.9	90.4	93.5
94	69.8	75.5	80.5	84.9	88.8	92.3	95.5
96	71.3	77.1	82.2	86.7	90.7	94.3	97.5
98	72.8	78.7	83.9	88.5	92.6	96.3	99.6
100	74.3	80.3	85.6	90.3	94.5	98.2	101.6
102	75.8	81.9	87.3	92.1	96.4	100.2	103.6
104	77.2	83.6	89.1	93.9	98.3	102.1	105.7
106	78.7	85.2	90.8	95.7	100.1	104.1	107.7
108	80.2	86.8	92.5	97.5	102.0	106.1	109.7
110	81.7	88.4	94.2	99.3	103.9	108.0	111.8
112	83.2	90.0	95.9	101.1	105.8	110.0	113.8
114	84.7	91.6	97.6	102.9	107.7	112.0	115.8
116	86.2	93.2	99.3	104.8	109.6	113.9	117.9
118	87.6	94.8	101.0	106.6	111.5	115.9	119.9
120	89.1	96.4	102.8	108.4	113.4	117.9	121.9
122	90.6	98.0	104.5	110.2	115.3	119.8	124.0
124	92.1	99.6	106.2	112.0	117.1	121.8	126.0
126	93.6	101.2	107.9	113.8	119.0	123.8	128.0
128	95.1	102.8	109.6	115.6	120.9	125.7	130.0
130	96.6	104.4	111.3	117.4	122.8	127.7	132.1
132	98.0	106.0	113.0	119.2	124.7	129.6	134.1
134	99.5	107.7	114.7	121.0	126.6	131.6	136.1
136	101.0	109.3	116.5	122.8	128.5	133.6	138.2
138	102.5	110.9	118.2	124.6	130.4	135.5	140.2
140	104.0	112.5	119.9	126.4	132.3	137.5	142.2
142	105.5	114.1	121.6	128.2	134.2	139.5	144.3
144	107.0	115.7	123.3	130.0	136.0	141.4	146.3
146	108.4	117.3	125.0	131.8	137.9	143.4	148.3
148	109.9	118.9	126.7	133.7	139.8	145.4	150.4

TABLE 15 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	111.4	120.5	128.4	135.5	141.7	147.3	152.4
152	112.9	122.1	130.2	137.3	143.6	149.3	154.4
154	114.4	123.7	131.9	139.1	145.5	151.3	156.5
156	115.9	125.3	133.6	140.9	147.4	153.2	158.5
158	117.4	126.9	135.3	142.7	149.3	155.2	160.5
160	118.8	128.5	137.0	144.5	151.2	157.1	162.6
162	120.3	130.1	138.7	146.3	153.0	159.1	164.6
164	121.8	131.8	140.4	148.1	154.9	161.1	166.6
166	123.3	133.4	142.1	149.9	156.8	163.0	168.7
168	124.8	135.0	143.9	151.7	158.7	165.0	170.7
170	126.3	136.6	145.6	153.5	160.6	167.0	172.7
172	127.7	138.2	147.3	155.3	162.5	168.9	174.8
174	129.2	139.8	149.0	157.1	164.4	170.9	176.8
176	130.7	141.4	150.7	158.9	166.3	172.9	178.8
178	132.2	143.0	152.4	160.7	168.2	174.8	180.8
180	133.7	144.6	154.1	162.5	170.1	176.8	182.9
182	135.2	146.2	155.8	164.4	171.9	178.8	184.9
184	136.7	147.8	157.6	166.2	173.8	180.7	186.9
186	138.1	149.4	159.3	168.0	175.7	182.7	189.0
188	139.6	151.0	161.0	169.8	177.6	184.6	191.0
190	141.1	152.6	162.7	171.6	179.5	186.6	193.0
192	142.6	154.2	164.4	173.4	181.4	188.6	195.1
194	144.1	155.9	166.1	175.2	183.3	190.5	197.1
196	145.6	157.5	167.8	177.0	185.2	192.5	199.1
198	147.1	159.1	169.5	178.8	187.1	194.5	201.2
200	148.5	160.7	171.3	180.6	188.9	196.4	203.2
202	150.0	162.3	173.0	182.4	190.8	198.4	205.2
204	151.5	163.9	174.7	184.2	192.7	200.4	207.3
206	153.0	165.5	176.4	186.0	194.6	202.3	209.3
208	154.5	167.1	178.1	187.8	196.5	204.3	211.3
210	156.0	168.7	179.8	189.6	198.4	206.3	213.4
212	157.5	170.3	181.5	191.4	200.3	208.2	215.4
214	158.9	171.9	183.2	193.3	202.2	210.2	217.4
216	160.4	173.5	185.0	195.1	204.1	212.1	219.5
218	161.9	175.1	186.7	196.9	205.9	214.1	221.5

Equation Used:
DBH=DSIB+0.065728*DSIB*(2.3-SH)+0.575037*DSIB*Ln((SH+1.0)/2.3)
Based on 4569 Trees. Standard Error of Estimated DBH = 3.11 cm

TABLE 16 **Stump and Breast Height Diameter Tables for: Spruce Species all ages in Forest Inventory Zones K and L**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.3	8.7	9.1	9.5	9.8	10.0	10.3
12	9.9	10.5	10.9	11.4	11.7	12.0	12.3
14	11.6	12.2	12.8	13.2	13.7	14.0	14.4
16	13.2	14.0	14.6	15.1	15.6	16.1	16.4
18	14.9	15.7	16.4	17.0	17.6	18.1	18.5
20	16.6	17.5	18.2	18.9	19.5	20.1	20.6
22	18.2	19.2	20.1	20.8	21.5	22.1	22.6
24	19.9	21.0	21.9	22.7	23.4	24.1	24.7
26	21.5	22.7	23.7	24.6	25.4	26.1	26.7
28	23.2	24.4	25.5	26.5	27.3	28.1	28.8
30	24.8	26.2	27.4	28.4	29.3	30.1	30.8
32	26.5	27.9	29.2	30.3	31.2	32.1	32.9
34	28.2	29.7	31.0	32.2	33.2	34.1	34.9
36	29.8	31.4	32.8	34.1	35.1	36.1	37.0
38	31.5	33.2	34.7	36.0	37.1	38.1	39.0
40	33.1	34.9	36.5	37.8	39.1	40.1	41.1
42	34.8	36.7	38.3	39.7	41.0	42.1	43.2
44	36.4	38.4	40.1	41.6	43.0	44.1	45.2
46	38.1	40.2	41.9	43.5	44.9	46.2	47.3
48	39.7	41.9	43.8	45.4	46.9	48.2	49.3
50	41.4	43.6	45.6	47.3	48.8	50.2	51.4
52	43.1	45.4	47.4	49.2	50.8	52.2	53.4
54	44.7	47.1	49.2	51.1	52.7	54.2	55.5
56	46.4	48.9	51.1	53.0	54.7	56.2	57.5
58	48.0	50.6	52.9	54.9	56.6	58.2	59.6
60	49.7	52.4	54.7	56.8	58.6	60.2	61.7
62	51.3	54.1	56.5	58.7	60.5	62.2	63.7
64	53.0	55.9	58.4	60.5	62.5	64.2	65.8
66	54.7	57.6	60.2	62.4	64.4	66.2	67.8
68	56.3	59.4	62.0	64.3	66.4	68.2	69.9
70	58.0	61.1	63.8	66.2	68.3	70.2	71.9
72	59.6	62.9	65.7	68.1	70.3	72.2	74.0
74	61.3	64.6	67.5	70.0	72.2	74.2	76.0
76	62.9	66.3	69.3	71.9	74.2	76.3	78.1
78	64.6	68.1	71.1	73.8	76.2	78.3	80.1

Equation Used:
DBH=DSIB+0.062808*DSIB*(2.3-SH)+0.442810*DSIB*Ln((SH+1.0)/2.3)
Based on 3054 Trees. Standard Error of Estimated DBH = 1.46 cm

TABLE 16 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	66.2	69.8	73.0	75.7	78.1	80.3	82.2
82	67.9	71.6	74.8	77.6	80.1	82.3	84.3
84	69.6	73.3	76.6	79.5	82.0	84.3	86.3
86	71.2	75.1	78.4	81.4	84.0	86.3	88.4
88	72.9	76.8	80.2	83.3	85.9	88.3	90.4
90	74.5	78.6	82.1	85.1	87.9	90.3	92.5
92	76.2	80.3	83.9	87.0	89.8	92.3	94.5
94	77.8	82.1	85.7	88.9	91.8	94.3	96.6
96	79.5	83.8	87.5	90.8	93.7	96.3	98.6
98	81.2	85.6	89.4	92.7	95.7	98.3	100.7
100	82.8	87.3	91.2	94.6	97.6	100.3	102.8
102	84.5	89.0	93.0	96.5	99.6	102.3	104.8
104	86.1	90.8	94.8	98.4	101.5	104.3	106.9
106	87.8	92.5	96.7	100.3	103.5	106.4	108.9
108	89.4	94.3	98.5	102.2	105.4	108.4	111.0
110	91.1	96.0	100.3	104.1	107.4	110.4	113.0
112	92.7	97.8	102.1	106.0	109.3	112.4	115.1
114	94.4	99.5	104.0	107.9	111.3	114.4	117.1
116	96.1	101.3	105.8	109.7	113.3	116.4	119.2
118	97.7	103.0	107.6	111.6	115.2	118.4	121.3
120	99.4	104.8	109.4	113.5	117.2	120.4	123.3
122	101.0	106.5	111.3	115.4	119.1	122.4	125.4
124	102.7	108.2	113.1	117.3	121.1	124.4	127.4
126	104.3	110.0	114.9	119.2	123.0	126.4	129.5
128	106.0	111.7	116.7	121.1	125.0	128.4	131.5
130	107.7	113.5	118.5	123.0	126.9	130.4	133.6
132	109.3	115.2	120.4	124.9	128.9	132.4	135.6
134	111.0	117.0	122.2	126.8	130.8	134.4	137.7
136	112.6	118.7	124.0	128.7	132.8	136.5	139.7
138	114.3	120.5	125.8	130.6	134.7	138.5	141.8
140	115.9	122.2	127.7	132.5	136.7	140.5	143.9
142	117.6	124.0	129.5	134.3	138.6	142.5	145.9
144	119.2	125.7	131.3	136.2	140.6	144.5	148.0
146	120.9	127.5	133.1	138.1	142.5	146.5	150.0
148	122.6	129.2	135.0	140.0	144.5	148.5	152.1

TABLE 16 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	124.2	130.9	136.8	141.9	146.5	150.5	154.1
152	125.9	132.7	138.6	143.8	148.4	152.5	156.2
154	127.5	134.4	140.4	145.7	150.4	154.5	158.2
156	129.2	136.2	142.3	147.6	152.3	156.5	160.3
158	130.8	137.9	144.1	149.5	154.3	158.5	162.4
160	132.5	139.7	145.9	151.4	156.2	160.5	164.4
162	134.2	141.4	147.7	153.3	158.2	162.5	166.5
164	135.8	143.2	149.6	155.2	160.1	164.5	168.5
166	137.5	144.9	151.4	157.0	162.1	166.6	170.6
168	139.1	146.7	153.2	158.9	164.0	168.6	172.6
170	140.8	148.4	155.0	160.8	166.0	170.6	174.7
172	142.4	150.2	156.8	162.7	167.9	172.6	176.7
174	144.1	151.9	158.7	164.6	169.9	174.6	178.8
176	145.7	153.6	160.5	166.5	171.8	176.6	180.8
178	147.4	155.4	162.3	168.4	173.8	178.6	182.9
180	149.1	157.1	164.1	170.3	175.7	180.6	185.0
182	150.7	158.9	166.0	172.2	177.7	182.6	187.0
184	152.4	160.6	167.8	174.1	179.6	184.6	189.1
186	154.0	162.4	169.6	176.0	181.6	186.6	191.1
188	155.7	164.1	171.4	177.9	183.6	188.6	193.2
190	157.3	165.9	173.3	179.8	185.5	190.6	195.2
192	159.0	167.6	175.1	181.6	187.5	192.6	197.3
194	160.7	169.4	176.9	183.5	189.4	194.6	199.3
196	162.3	171.1	178.7	185.4	191.4	196.7	201.4
198	164.0	172.8	180.6	187.3	193.3	198.7	203.5
200	165.6	174.6	182.4	189.2	195.3	200.7	205.5
202	167.3	176.3	184.2	191.1	197.2	202.7	207.6
204	168.9	178.1	186.0	193.0	199.2	204.7	209.6
206	170.6	179.8	187.9	194.9	201.1	206.7	211.7
208	172.2	181.6	189.7	196.8	203.1	208.7	213.7
210	173.9	183.3	191.5	198.7	205.0	210.7	215.8
212	175.6	185.1	193.3	200.6	207.0	212.7	217.8
214	177.2	186.8	195.1	202.5	208.9	214.7	219.9
216	178.9	188.6	197.0	204.4	210.9	216.7	222.0
218	180.5	190.3	198.8	206.2	212.8	218.7	224.0

Equation Used:
DBH=DSIB+0.062808*DSIB*(2.3-SH)+0.442810*DSIB*Ln((SH+1.0)/2.3)
Based on 3054 Trees. Standard Error of Estimated DBH = 1.46 cm

TABLE 17 **Stump and Breast Height Diameter Tables for: Yellow-cedar all ages in Forest Inventory Zones A to L**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	7.6	8.1	8.6	9.0	9.3	9.6	9.9
12	9.1	9.7	10.3	10.8	11.2	11.6	11.9
14	10.7	11.4	12.0	12.5	13.0	13.5	13.9
16	12.2	13.0	13.7	14.3	14.9	15.4	15.9
18	13.7	14.6	15.4	16.1	16.8	17.4	17.9
20	15.2	16.2	17.1	17.9	18.6	19.3	19.9
22	16.7	17.9	18.8	19.7	20.5	21.2	21.9
24	18.3	19.5	20.6	21.5	22.4	23.1	23.8
26	19.8	21.1	22.3	23.3	24.2	25.1	25.8
28	21.3	22.7	24.0	25.1	26.1	27.0	27.8
30	22.8	24.4	25.7	26.9	28.0	28.9	29.8
32	24.3	26.0	27.4	28.7	29.8	30.9	31.8
34	25.9	27.6	29.1	30.5	31.7	32.8	33.8
36	27.4	29.2	30.8	32.3	33.5	34.7	35.8
38	28.9	30.8	32.5	34.1	35.4	36.6	37.8
40	30.4	32.5	34.3	35.8	37.3	38.6	39.7
42	32.0	34.1	36.0	37.6	39.1	40.5	41.7
44	33.5	35.7	37.7	39.4	41.0	42.4	43.7
46	35.0	37.3	39.4	41.2	42.9	44.3	45.7
48	36.5	39.0	41.1	43.0	44.7	46.3	47.7
50	38.0	40.6	42.8	44.8	46.6	48.2	49.7
52	39.6	42.2	44.5	46.6	48.5	50.1	51.7
54	41.1	43.8	46.2	48.4	50.3	52.1	53.7
56	42.6	45.5	48.0	50.2	52.2	54.0	55.6
58	44.1	47.1	49.7	52.0	54.0	55.9	57.6
60	45.6	48.7	51.4	53.8	55.9	57.8	59.6
62	47.2	50.3	53.1	55.6	57.8	59.8	61.6
64	48.7	51.9	54.8	57.4	59.6	61.7	63.6
66	50.2	53.6	56.5	59.1	61.5	63.6	65.6
68	51.7	55.2	58.2	60.9	63.4	65.6	67.6
70	53.3	56.8	59.9	62.7	65.2	67.5	69.5
72	54.8	58.4	61.7	64.5	67.1	69.4	71.5
74	56.3	60.1	63.4	66.3	69.0	71.3	73.5
76	57.8	61.7	65.1	68.1	70.8	73.3	75.5
78	59.3	63.3	66.8	69.9	72.7	75.2	77.5

Equation Used:
DBH=DSIB+0.037211*DSIB*(2.3-SH)+0.460492*DSIB*Ln((SH+1.0)/2.3)
Based on 302 Trees. Standard Error of Estimated DBH = 2.03 cm

TABLE 17 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	60.9	64.9	68.5	71.7	74.5	77.1	79.5
82	62.4	66.6	70.2	73.5	76.4	79.1	81.5
84	63.9	68.2	71.9	75.3	78.3	81.0	83.5
86	65.4	69.8	73.6	77.1	80.1	82.9	85.4
88	67.0	71.4	75.4	78.9	82.0	84.8	87.4
90	68.5	73.1	77.1	80.7	83.9	8[illegible]9	89.4
92	70.0	74.7	78.8	82.4	85.7	88.[illegible]	91.4
94	71.5	76.3	80.5	84.2	87.6	90.[illegible]	93.4
96	73.0	77.9	82.2	86.0	89.5	92.6	95.4
98	74.6	79.5	83.9	87.8	91.3	94.5	97.4
100	76.1	81.2	85.6	89.6	93.2	96.4	99.4
102	77.6	82.8	87.4	91.4	95.0	98.3	101.3
104	79.1	84.4	89.1	93.2	96.9	100.3	103.3
106	80.6	86.0	90.8	95.0	98.8	102.2	105.3
108	82.2	87.7	92.5	96.8	100.6	104.1	107.3
110	83.7	89.3	94.2	98.6	102.5	106.1	109.3
112	85.2	90.9	95.9	100.4	104.4	108.0	111.3
114	86.7	92.5	97.6	102.2	106.2	109.9	113.3
116	88.3	94.2	99.3	104.0	108.1	111.8	115.2
118	89.8	95.8	101.1	105.7	110.0	113.8	117.2
120	91.3	97.4	102.8	107.5	111.8	115.7	119.2
122	92.8	99.0	104.5	109.3	113.7	117.6	121.2
124	94.3	100.6	106.2	111.1	115.5	119.6	123.2
126	95.9	102.3	107.9	112.9	117.4	121.5	125.2
128	97.4	103.9	109.6	114.7	119.3	123.4	127.2
130	98.9	105.5	111.3	116.5	121.1	125.3	129.2
132	100.4	107.1	113.0	118.3	123.0	127.3	131.1
134	101.9	108.8	114.8	120.1	124.9	129.2	133.1
136	103.5	110.4	116.5	121.9	126.7	131.1	135.1
138	105.0	112.0	118.2	123.7	128.6	133.0	137.1
140	106.5	113.6	119.9	125.5	130.5	135.0	139.1
142	108.0	115.3	121.6	127.3	132.3	136.9	141.1
144	109.6	116.9	123.3	129.0	134.2	138.8	143.1
146	111.1	118.5	125.0	130.8	136.0	140.8	145.1
148	112.6	120.1	126.7	132.6	137.9	142.7	147.0

TABLE 17 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	114.1	121.8	128.5	134.4	139.8	144.6	149.0
152	115.6	123.4	130.2	136.2	141.6	146.5	151.0
154	117.2	125.0	131.9	138.0	143.5	148.5	153.0
156	118.7	126.6	133.6	139.8	145.4	150.4	155.0
158	120.2	128.2	135.3	141.6	147.2	152.3	157.0
160	121.7	129.9	137.0	143.4	149.1	154.3	159.0
162	123.3	131.5	138.7	145.2	151.0	156.2	161.0
164	124.8	133.1	140.4	147.0	152.8	158.1	162.9
166	126.3	134.7	142.2	148.8	154.7	160.0	164.9
168	127.8	136.4	143.9	150.6	156.5	162.0	166.9
170	129.3	138.0	145.6	152.3	158.4	163.9	168.9
172	130.9	139.6	147.3	154.1	160.3	165.8	170.9
174	132.4	141.2	149.0	155.9	162.1	167.8	172.9
176	133.9	142.9	150.7	157.7	164.0	169.7	174.9
178	135.4	144.5	152.4	159.5	165.9	171.6	176.8
180	136.9	146.1	154.2	161.3	167.7	173.5	178.8
182	138.5	147.7	155.9	163.1	169.6	175.5	180.8
184	140.0	149.4	157.6	164.9	171.5	177.4	182.8
186	141.5	151.0	159.3	166.7	173.3	179.3	184.8
188	143.0	152.6	161.0	168.5	175.2	181.3	186.8
190	144.6	154.2	162.7	170.3	177.0	183.2	188.8
192	146.1	155.8	164.4	172.1	178.9	185.1	190.8
194	147.6	157.5	166.1	173.9	180.8	187.0	192.7
196	149.1	159.1	167.9	175.6	182.6	189.0	194.7
198	150.6	160.7	169.6	177.4	184.5	190.9	196.7
200	152.2	162.3	171.3	179.2	186.4	192.8	198.7
202	153.7	164.0	173.0	181.0	188.2	194.8	200.7
204	155.2	165.6	174.7	182.8	190.1	196.7	202.7
206	156.7	167.2	176.4	184.6	192.0	198.6	204.7
208	158.2	168.8	178.1	186.4	193.8	200.5	206.7
210	159.8	170.5	179.8	188.2	195.7	202.5	208.6
212	161.3	172.1	181.6	190.0	197.5	204.4	210.6
214	162.8	173.7	183.3	191.8	199.4	206.3	212.6
216	164.3	175.3	185.0	193.6	201.3	208.2	214.6
218	165.9	176.9	186.7	195.4	203.1	210.2	216.6

Equation Used:
DBH=DSIB+0.037211*DSIB*(2.3-SH)+0.460492*DSIB*Ln((SH+1.0)/2.3)
Based on 302 Trees. Standard Error of Estimated DBH = 2.03 cm

TABLE 18 Stump and Breast Height Diameter Tables for: Western White Pine all ages in Forest Inventory Zones A,B,C

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	7.3	7.9	8.5	8.9	9.4	9.7	10.1
12	8.8	9.5	10.2	10.7	11.2	11.7	12.1
14	10.3	11.1	11.9	12.5	13.1	13.6	14.1
16	11.7	12.7	13.6	14.3	15.0	15.6	16.1
18	13.2	14.3	15.2	16.1	16.8	17.5	18.1
20	14.7	15.9	16.9	17.9	18.7	19.5	20.1
22	16.2	17.5	18.6	19.7	20.6	21.4	22.2
24	17.6	19.1	20.3	21.5	22.5	23.4	24.2
26	19.1	20.7	22.0	23.2	24.3	25.3	26.2
28	20.6	22.2	23.7	25.0	26.2	27.2	28.2
30	22.0	23.8	25.4	26.8	28.1	29.2	30.2
32	23.5	25.4	27.1	28.6	29.9	31.1	32.2
34	25.0	27.0	28.8	30.4	31.8	33.1	34.2
36	26.4	28.6	30.5	32.2	33.7	35.0	36.3
38	27.9	30.2	32.2	34.0	35.5	37.0	38.3
40	29.4	31.8	33.9	35.8	37.4	38.9	40.3
42	30.8	33.4	35.6	37.5	39.3	40.9	42.3
44	32.3	35.0	37.3	39.3	41.2	42.8	44.3
46	33.8	36.5	39.0	41.1	43.0	44.8	46.3
48	35.2	38.1	40.7	42.9	44.9	46.7	48.3
50	36.7	39.7	42.4	44.7	46.8	48.7	50.4
52	38.2	41.3	44.0	46.5	48.6	50.6	52.4
54	39.6	42.9	45.7	48.3	50.5	52.5	54.4
56	41.1	44.5	47.4	50.1	52.4	54.5	56.4
58	42.6	46.1	49.1	51.8	54.3	56.4	58.4
60	44.0	47.7	50.8	53.6	56.1	58.4	60.4
62	45.5	49.3	52.5	55.4	58.0	60.3	62.4
64	47.0	50.8	54.2	57.2	59.9	62.3	64.5
66	48.5	52.4	55.9	59.0	61.7	64.2	66.5
68	49.9	54.0	57.6	60.8	63.6	66.2	68.5
70	51.4	55.6	59.3	62.6	65.5	68.1	70.5
72	52.9	57.2	61.0	64.4	67.4	70.1	72.5
74	54.3	58.8	62.7	66.1	69.2	72.0	74.5
76	55.8	60.4	64.4	67.9	71.1	74.0	76.5
78	57.3	62.0	66.1	69.7	73.0	75.9	78.6

Equation Used:
DBH=DSIB+0.057377*DSIB*(2.3-SH)+0.561538*DSIB*Ln((SH+1.0)/2.3)
Based on 88 Trees. Standard Error of Estimated DBH = 3.32 cm

TABLE 18 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	58.7	63.5	67.8	71.5	74.8	77.8	80.6
82	60.2	65.1	69.5	73.3	76.7	79.8	82.6
84	61.7	66.7	71.2	75.1	78.6	81.7	84.6
86	63.1	68.3	72.8	76.9	80.5	83.7	86.6
88	64.6	69.9	74.5	78.7	82.3	85.6	88.6
90	66.1	71.5	76.2	80.4	84.2	87.6	90.6
92	67.5	73.1	77.9	82.2	86.1	89.5	92.7
94	69.0	74.7	79.6	84.0	87.9	91.5	94.7
96	70.5	76.3	81.3	85.8	89.8	93.4	96.7
98	71.9	77.8	83.0	87.6	91.7	95.4	98.7
100	73.4	79.4	84.7	89.4	93.5	97.3	100.7
102	74.9	81.0	86.4	91.2	95.4	99.3	102.7
104	76.3	82.6	88.1	93.0	97.3	101.2	104.7
106	77.8	84.2	89.8	94.7	99.2	103.1	106.8
108	79.3	85.8	91.5	96.5	101.0	105.1	108.8
110	80.8	87.4	93.2	98.3	102.9	107.0	110.8
112	82.2	89.0	94.9	100.1	104.8	109.0	112.8
114	83.7	90.6	96.6	101.9	106.6	110.9	114.8
116	85.2	92.1	98.3	103.7	108.5	112.9	116.8
118	86.6	93.7	100.0	105.5	110.4	114.8	118.8
120	88.1	95.3	101.7	107.3	112.3	116.8	120.9
122	89.6	96.9	103.3	109.0	114.1	118.7	122.9
124	91.0	98.5	105.0	110.8	116.0	120.7	124.9
126	92.5	100.1	106.7	112.6	117.9	122.6	126.9
128	94.0	101.7	108.4	114.4	119.7	124.5	128.9
130	95.4	103.3	110.1	116.2	121.6	126.5	130.9
132	96.9	104.9	111.8	118.0	123.5	128.4	132.9
134	98.4	106.4	113.5	119.8	125.4	130.4	135.0
136	99.8	108.0	115.2	121.6	127.2	132.3	137.0
138	101.3	109.6	116.9	123.3	129.1	134.3	139.0
140	102.8	111.2	118.6	125.1	131.0	136.2	141.0
142	104.2	112.8	120.3	126.9	132.8	138.2	143.0
144	105.7	114.4	122.0	128.7	134.7	140.1	145.0
146	107.2	116.0	123.7	130.5	136.5	142.1	147.0
148	108.7	117.6	125.4	132.3	138.4	144.0	149.1

TABLE 18 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	110.1	119.2	127.1	134.1	140.3	146.0	151.1
152	111.6	120.7	128.8	135.9	142.2	147.9	153.1
154	113.1	122.3	130.5	137.6	144.1	149.8	155.1
156	114.5	123.9	132.1	139.4	145.9	151.8	157.1
158	116.0	125.5	133.8	141.2	147.8	153.7	159.1
160	117.5	127.1	135.5	143.0	149.7	155.7	161.1
162	118.9	128.7	137.2	144.8	151.5	157.6	163.2
164	120.4	130.3	138.9	146.6	153.4	159.6	165.2
166	121.9	131.9	140.6	148.4	155.3	161.5	167.2
168	123.3	133.5	142.3	150.2	157.2	163.5	169.2
170	124.8	135.0	144.0	151.9	159.0	165.4	171.2
172	126.3	136.6	145.7	153.7	160.9	167.4	173.2
174	127.7	138.2	147.4	155.5	162.8	169.3	175.2
176	129.2	139.8	149.1	157.3	164.6	171.3	177.3
178	130.7	141.4	150.8	159.1	166.5	173.2	179.3
180	132.1	143.0	152.5	160.9	168.4	175.1	181.3
182	133.6	144.6	154.2	162.7	170.3	177.1	183.3
184	135.1	146.2	155.9	164.5	172.1	179.0	185.3
186	136.5	147.8	157.6	166.2	174.0	181.0	187.3
188	138.0	149.3	159.3	168.0	175.9	182.9	189.3
190	139.5	150.9	160.9	169.8	177.7	184.9	191.4
192	141.0	152.5	162.6	171.6	179.6	186.8	193.4
194	142.4	154.1	164.3	173.4	181.5	188.8	195.4
196	143.9	155.7	166.0	175.2	183.4	190.7	197.4
198	145.4	157.3	167.7	177.0	185.2	192.7	199.4
200	146.8	158.9	169.4	178.8	187.1	194.6	201.4
202	148.3	160.5	171.1	180.5	189.0	196.6	203.4
204	149.8	162.1	172.8	182.3	190.8	198.5	205.4
206	151.2	163.6	174.5	184.1	192.7	200.4	207.5
208	152.7	165.2	176.2	185.9	194.6	202.4	209.5
210	154.2	166.8	177.9	187.7	196.4	204.3	211.5
212	155.6	168.4	179.6	189.5	198.3	206.3	213.5
214	157.1	170.0	181.3	191.3	200.2	208.2	215.5
216	158.6	171.6	183.0	193.1	202.1	210.2	217.5
218	160.0	173.2	184.7	194.8	203.9	212.1	219.5

Equation Used:
DBH=DSIB+0.057377*DSIB*(2.3-SH)+0.561538*DSIB*Ln((SH+1.0)/2.3)
Based on 88 Trees. Standard Error of Estimated DBH = 3.32 cm

TABLE 19 **Stump and Breast Height Diameter Tables for: Western White Pine** all ages in **Forest Inventory Zones D to L**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.1	8.6	9.0	9.3	9.7	9.9	10.2
12	9.7	10.3	10.8	11.2	11.6	11.9	12.2
14	11.4	12.0	12.6	13.1	13.5	13.9	14.3
16	13.0	13.7	14.4	14.9	15.4	15.9	16.3
18	14.6	15.4	16.2	16.8	17.4	17.9	18.4
20	16.2	17.2	18.0	18.7	19.3	19.9	20.4
22	17.8	18.9	19.8	20.5	21.2	21.9	22.4
24	19.5	20.6	21.6	22.4	23.2	23.9	24.5
26	21.1	22.3	23.4	24.3	25.1	25.8	26.5
28	22.7	24.0	25.1	26.1	27.0	27.8	28.5
30	24.3	25.7	26.9	28.0	29.0	29.8	30.6
32	26.0	27.4	28.7	29.9	30.9	31.8	32.6
34	27.6	29.2	30.5	31.7	32.8	33.8	34.7
36	29.2	30.9	32.3	33.6	34.8	35.8	36.7
38	30.8	32.6	34.1	35.5	36.7	37.8	38.7
40	32.4	34.3	35.9	37.4	38.6	39.8	40.8
42	34.1	36.0	37.7	39.2	40.6	41.7	42.8
44	35.7	37.7	39.5	41.1	42.5	43.7	44.9
46	37.3	39.5	41.3	43.0	44.4	45.7	46.9
48	38.9	41.2	43.1	44.8	46.3	47.7	48.9
50	40.6	42.9	44.9	46.7	48.3	49.7	51.0
52	42.2	44.6	46.7	48.6	50.2	51.7	53.0
54	43.8	46.3	48.5	50.4	52.1	53.7	55.1
56	45.4	48.0	50.3	52.3	54.1	55.7	57.1
58	47.0	49.7	52.1	54.2	56.0	57.6	59.1
60	48.7	51.5	53.9	56.0	57.9	59.6	61.2
62	50.3	53.2	55.7	57.9	59.9	61.6	63.2
64	51.9	54.9	57.5	59.8	61.8	63.6	65.2
66	53.5	56.6	59.3	61.6	63.7	65.6	67.3
68	55.2	58.3	61.1	63.5	65.7	67.6	69.3
70	56.8	60.0	62.9	65.4	67.6	69.6	71.4
72	58.4	61.7	64.7	67.2	69.5	71.6	73.4
74	60.0	63.5	66.5	69.1	71.4	73.5	75.4
76	61.6	65.2	68.3	71.0	73.4	75.5	77.5
78	63.3	66.9	70.1	72.8	75.3	77.5	79.5

Equation Used:
DBH=DSIB+0.056953*DSIB*(2.3-SH)+0.449184*DSIB*Ln((SH+1.0)/2.3)
Based on 256 Trees. Standard Error of Estimated DBH = 1.76 cm

TABLE 19 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	64.9	68.6	71.9	74.7	77.2	79.5	81.6
82	66.5	70.3	73.6	76.6	79.2	81.5	83.6
84	68.1	72.0	75.4	78.4	81.1	83.5	85.6
86	69.8	73.8	77.2	80.3	83.0	85.5	87.7
88	71.4	75.5	79.0	82.2	85.0	87.5	89.7
90	73.0	77.2	80.8	84.0	86.9	89.5	91.8
92	74.6	78.9	82.6	85.9	88.8	91.4	93.8
94	76.2	80.6	84.4	87.8	90.8	93.4	95.8
96	77.9	82.3	86.2	89.6	92.7	95.4	97.9
98	79.5	84.0	88.0	91.5	94.6	97.4	99.9
100	81.1	85.8	89.8	93.4	96.6	99.4	102.0
102	82.7	87.5	91.6	95.2	98.5	101.4	104.0
104	84.4	89.2	93.4	97.1	100.4	103.4	106.0
106	86.0	90.9	95.2	99.0	102.3	105.4	108.1
108	87.6	92.6	97.0	100.9	104.3	107.3	110.1
110	89.2	94.3	98.8	102.7	106.2	109.3	112.1
112	90.8	96.1	100.6	104.6	108.1	111.3	114.2
114	92.5	97.8	102.4	106.5	110.1	113.3	116.2
116	94.1	99.5	104.2	108.3	112.0	115.3	118.3
118	95.7	101.2	106.0	110.2	113.9	117.3	120.3
120	97.3	102.9	107.8	112.1	115.9	119.3	122.3
122	99.0	104.6	109.6	113.9	117.8	121.3	124.4
124	100.6	106.3	111.4	115.8	119.7	123.2	126.4
126	102.2	108.1	113.2	117.7	121.7	125.2	128.5
128	103.8	109.8	115.0	119.5	123.6	127.2	130.5
130	105.4	111.5	116.8	121.4	125.5	129.2	132.5
132	107.1	113.2	118.6	123.3	127.4	131.2	134.6
134	108.7	114.9	120.3	125.1	129.4	133.2	136.6
136	110.3	116.6	122.1	127.0	131.3	135.2	138.7
138	111.9	118.4	123.9	128.9	133.2	137.2	140.7
140	113.6	120.1	125.7	130.7	135.2	139.1	142.7
142	115.2	121.8	127.5	132.6	137.1	141.1	144.8
144	116.8	123.5	129.3	134.5	139.0	143.1	146.8
146	118.4	125.2	131.1	136.3	141.0	145.1	148.8
148	120.0	126.9	132.9	138.2	142.9	147.1	150.9

TABLE 19 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	121.7	128.6	134.7	140.1	144.8	149.1	152.9
152	123.3	130.4	136.5	141.9	146.8	151.1	155.0
154	124.9	132.1	138.3	143.8	148.7	153.1	157.0
156	126.5	133.8	140.1	145.7	150.6	155.1	159.0
158	128.2	135.5	141.9	147.5	152.6	157.0	161.1
160	129.8	137.2	143.7	149.4	154.5	159.0	163.1
162	131.4	138.9	145.5	151.3	156.4	161.0	165.2
164	133.0	140.7	147.3	153.1	158.3	163.0	167.2
166	134.6	142.4	149.1	155.0	160.3	165.0	169.2
168	136.3	144.1	150.9	156.9	162.2	167.0	171.3
170	137.9	145.8	152.7	158.7	164.1	169.0	173.3
172	139.5	147.5	154.5	160.6	166.1	171.0	175.4
174	141.1	149.2	156.3	162.5	168.0	172.9	177.4
176	142.8	150.9	158.1	164.4	169.9	174.9	179.4
178	144.4	152.7	159.9	166.2	171.9	176.9	181.5
180	146.0	154.4	161.7	168.1	173.8	178.9	183.5
182	147.6	156.1	163.5	170.0	175.7	180.9	185.5
184	149.2	157.8	165.3	171.8	177.7	182.9	187.6
186	150.9	159.5	167.1	173.7	179.6	184.9	189.6
188	152.5	161.2	168.8	175.6	181.5	186.9	191.7
190	154.1	162.9	170.6	177.4	183.4	188.8	193.7
192	155.7	164.7	172.4	179.3	185.4	190.8	195.7
194	157.4	166.4	174.2	181.2	187.3	192.8	197.8
196	159.0	168.1	176.0	183.0	189.2	194.8	199.8
198	160.6	169.8	177.8	184.9	191.2	196.8	201.9
200	162.2	171.5	179.6	186.8	193.1	198.8	203.9
202	163.8	173.2	181.4	188.6	195.0	200.8	205.9
204	165.5	175.0	183.2	190.5	197.0	202.8	208.0
206	167.1	176.7	185.0	192.4	198.9	204.7	210.0
208	168.7	178.4	186.8	194.2	200.8	206.7	212.1
210	170.3	180.1	188.6	196.1	202.8	208.7	214.1
212	172.0	181.8	190.4	198.0	204.7	210.7	216.1
214	173.6	183.5	192.2	199.8	206.6	212.7	218.2
216	175.2	185.2	194.0	201.7	208.6	214.7	220.2
218	176.8	187.0	195.8	203.6	210.5	216.7	222.3

Equation Used:
DBH=DSIB+0.056953*DSIB*(2.3-SH)+0.449184*DSIB*Ln((SH+1.0)/2.3)
Based on 256 Trees. Standard Error of Estimated DBH = 1.76 cm

TABLE 20 **Stump and Breast Height Diameter Tables for: Lodgepole Pine all ages in Forest Inventory Zones A to J**

DSIB (cm)	Diameter Breast Height Outside Bark in cm — Stump Height in m						
	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.6	9.0	9.3	9.6	9.9	10.1	10.3
12	10.4	10.8	11.2	11.5	11.8	12.1	12.3
14	12.1	12.6	13.1	13.5	13.8	14.1	14.4
16	13.8	14.4	14.9	15.4	15.8	16.1	16.5
18	15.5	16.2	16.8	17.3	17.7	18.1	18.5
20	17.3	18.0	18.7	19.2	19.7	20.2	20.6
22	19.0	19.8	20.5	21.1	21.7	22.2	22.6
24	20.7	21.6	22.4	23.1	23.7	24.2	24.7
26	22.4	23.4	24.2	25.0	25.6	26.2	26.7
28	24.2	25.2	26.1	26.9	27.6	28.2	28.8
30	25.9	27.0	28.0	28.8	29.6	30.2	30.8
32	27.6	28.8	29.8	30.7	31.6	32.3	32.9
34	29.3	30.6	31.7	32.7	33.5	34.3	35.0
36	31.1	32.4	33.6	34.6	35.5	36.3	37.0
38	32.8	34.2	35.4	36.5	37.5	38.3	39.1
40	34.5	36.0	37.3	38.4	39.4	40.3	41.1
42	36.2	37.8	39.2	40.4	41.4	42.3	43.2
44	38.0	39.6	41.0	42.3	43.4	44.4	45.2
46	39.7	41.4	42.9	44.2	45.4	46.4	47.3
48	41.4	43.2	44.8	46.1	47.3	48.4	49.4
50	43.1	45.0	46.6	48.0	49.3	50.4	51.4
52	44.9	46.8	48.5	50.0	51.3	52.4	53.5
54	46.6	48.6	50.4	51.9	53.2	54.4	55.5
56	48.3	50.4	52.2	53.8	55.2	56.5	57.6
58	50.0	52.2	54.1	55.7	57.2	58.5	59.6
60	51.8	54.0	56.0	57.7	59.2	60.5	61.7
62	53.5	55.8	57.8	59.6	61.1	62.5	63.7
64	55.2	57.6	59.7	61.5	63.1	64.5	65.8
66	56.9	59.4	61.6	63.4	65.1	66.5	67.9
68	58.7	61.2	63.4	65.3	67.0	68.6	69.9
70	60.4	63.0	65.3	67.3	69.0	70.6	72.0
72	62.1	64.8	67.1	69.2	71.0	72.6	74.0
74	63.9	66.6	69.0	71.1	73.0	74.6	76.1
76	65.6	68.4	70.9	73.0	74.9	76.6	78.1
78	67.3	70.2	72.7	75.0	76.9	78.6	80.2

Equation Used:
DBH=DSIB+0.056984*DSIB*(2.3-SH)+0.374589*DSIB*Ln((SH+1.0)/2.3)
Based on 2881 Trees. Standard Error of Estimated DBH = 1.23 cm

TABLE 20 (Concluded)

DSIB (cm)	Diameter Breast Height Outside Bark in cm — Stump Height in m						
	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	69.0	72.0	74.6	76.9	78.9	80.7	82.3
82	70.8	73.8	76.5	78.8	80.8	82.7	84.3
84	72.5	75.6	78.3	80.7	82.8	84.7	86.4
86	74.2	77.4	80.2	82.6	84.8	86.7	88.4
88	75.9	79.2	82.1	84.6	86.8	88.7	90.5
90	77.7	81.0	83.9	86.5	88.7	90.7	92.5
92	79.4	82.8	85.8	88.4	90.7	92.8	94.6
94	81.1	84.6	87.7	90.3	92.7	94.8	96.6
96	82.8	86.4	89.5	92.2	94.7	96.8	98.7
98	84.6	88.2	91.4	94.2	96.6	98.8	100.8
100	86.3	90.0	93.3	96.1	98.6	100.8	102.8
102	88.0	91.8	95.1	98.0	100.6	102.8	104.9
104	89.7	93.6	97.0	99.9	102.5	104.9	106.9
106	91.5	95.4	98.9	101.9	104.5	106.9	109.0
108	93.2	97.2	100.7	103.8	106.5	108.9	111.0
110	94.9	99.0	102.6	105.7	108.5	110.9	113.1
112	96.6	100.8	104.5	107.6	110.4	112.9	115.2
114	98.4	102.6	106.3	109.5	112.4	114.9	117.2
116	100.1	104.4	108.2	111.5	114.4	117.0	119.3
118	101.8	106.2	110.0	113.4	116.3	119.0	121.3
120	103.5	108.0	111.9	115.3	118.3	121.0	123.4
122	105.3	109.8	113.8	117.2	120.3	123.0	125.4
124	107.0	111.6	115.6	119.2	122.3	125.0	127.5
126	108.7	113.4	117.5	121.1	124.2	127.0	129.5
128	110.4	115.2	119.4	123.0	126.2	129.1	131.6
130	112.2	117.0	121.2	124.9	128.2	131.1	133.7
132	113.9	118.8	123.1	126.8	130.1	133.1	135.7
134	115.6	120.6	125.0	128.8	132.1	135.1	137.8
136	117.4	122.4	126.8	130.7	134.1	137.1	139.8
138	119.1	124.2	128.7	132.6	136.1	139.1	141.9
140	120.8	126.0	130.6	134.5	138.0	141.1	143.9
142	122.5	127.8	132.4	136.5	140.0	143.2	146.0
144	124.3	129.6	134.3	138.4	142.0	145.2	148.1
146	126.0	131.4	136.2	140.3	143.9	147.2	150.1
148	127.7	133.2	138.0	142.2	145.9	149.2	152.2

TABLE 21 **Stump and Breast Height Diameter Tables for: Lodgepole Pine all ages in Forest Inventory Zones K and L**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.8	9.1	9.4	9.6	9.9	10.1	10.3
12	10.5	10.9	11.3	11.6	11.8	12.1	12.3
14	12.3	12.7	13.1	13.5	13.8	14.1	14.4
16	14.0	14.6	15.0	15.4	15.8	16.1	16.4
18	15.8	16.4	16.9	17.4	17.8	18.1	18.5
20	17.5	18.2	18.8	19.3	19.7	20.1	20.5
22	19.3	20.0	20.7	21.2	21.7	22.2	22.6
24	21.0	21.8	22.5	23.1	23.7	24.2	24.6
26	22.8	23.7	24.4	25.1	25.7	26.2	26.7
28	24.5	25.5	26.3	27.0	27.6	28.2	28.7
30	26.3	27.3	28.2	28.9	29.6	30.2	30.8
32	28.0	29.1	30.0	30.9	31.6	32.2	32.8
34	29.8	30.9	31.9	32.8	33.6	34.2	34.9
36	31.5	32.8	33.8	34.7	35.5	36.3	36.9
38	33.3	34.6	35.7	36.7	37.5	38.3	39.0
40	35.0	36.4	37.6	38.6	39.5	40.3	41.0
42	36.8	38.2	39.4	40.5	41.5	42.3	43.1
44	38.6	40.0	41.3	42.4	43.4	44.3	45.1
46	40.3	41.9	43.2	44.4	45.4	46.3	47.2
48	42.1	43.7	45.1	46.3	47.4	48.3	49.2
50	43.8	45.5	46.9	48.2	49.4	50.4	51.3
52	45.6	47.3	48.8	50.2	51.3	52.4	53.3
54	47.3	49.1	50.7	52.1	53.3	54.4	55.4
56	49.1	51.0	52.6	54.0	55.3	56.4	57.4
58	50.8	52.8	54.5	55.9	57.2	58.4	59.5
60	52.6	54.6	56.3	57.9	59.2	60.4	61.5
62	54.3	56.4	58.2	59.8	61.2	62.4	63.6
64	56.1	58.2	60.1	61.7	63.2	64.5	65.6
66	57.8	60.1	62.0	63.7	65.1	66.5	67.7
68	59.6	61.9	63.9	65.6	67.1	68.5	69.7
70	61.3	63.7	65.7	67.5	69.1	70.5	71.8
72	63.1	65.5	67.6	69.4	71.1	72.5	73.8
74	64.8	67.3	69.5	71.4	73.0	74.5	75.9
76	66.6	69.1	71.4	73.3	75.0	76.5	77.9
78	68.3	71.0	73.2	75.2	77.0	78.6	80.0

Equation Used:
DBH=DSIB+0.051075*DSIB*(2.3-SH)+0.337046*DSIB*Ln((SH+1.0)/2.3)
Based on 1369 Trees. Standard Error of Estimated DBH = 0.91 cm

TABLE 21 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	70.1	72.8	75.1	77.2	79.0	80.6	82.0
82	71.8	74.6	77.0	79.1	80.9	82.6	84.1
84	73.6	76.4	78.9	81.0	82.9	84.6	86.1
86	75.4	78.2	80.8	82.9	84.9	86.6	88.2
88	77.1	80.1	82.6	84.9	86.9	88.6	90.2
90	78.9	81.9	84.5	86.8	88.8	90.6	92.3
92	80.6	83.7	86.4	88.7	90.8	92.7	94.3
94	82.4	85.5	88.3	90.7	92.8	94.7	96.4
96	84.1	87.3	90.1	92.6	94.8	96.7	98.4
98	85.9	89.2	92.0	94.5	96.7	98.7	100.5
100	87.6	91.0	93.9	96.5	98.7	100.7	102.5
102	89.4	92.8	95.8	98.4	100.7	102.7	104.6
104	91.1	94.6	97.7	100.3	102.7	104.7	106.6
106	92.9	96.4	99.5	102.2	104.6	106.8	108.7
108	94.6	98.3	101.4	104.2	106.6	108.8	110.7
110	96.4	100.1	103.3	106.1	108.6	110.8	112.8
112	98.1	101.9	105.2	108.0	110.6	112.8	114.8
114	99.9	103.7	107.0	110.0	112.5	114.8	116.9
116	101.6	105.5	108.9	111.9	114.5	116.8	118.9
118	103.4	107.4	110.8	113.8	116.5	118.8	121.0
120	105.1	109.2	112.7	115.7	118.4	120.9	123.0
122	106.9	111.0	114.6	117.7	120.4	122.9	125.1
124	108.6	112.8	116.4	119.6	122.4	124.9	127.1
126	110.4	114.6	118.3	121.5	124.4	126.9	129.2
128	112.2	116.5	120.2	123.5	126.3	128.9	131.2
130	113.9	118.3	122.1	125.4	128.3	130.9	133.3
132	115.7	120.1	123.9	127.3	130.3	132.9	135.3
134	117.4	121.9	125.8	129.2	132.3	135.0	137.4
136	119.2	123.7	127.7	131.2	134.2	137.0	139.4
138	120.9	125.6	129.6	133.1	136.2	139.0	141.5
140	122.7	127.4	131.5	135.0	138.2	141.0	143.5
142	124.4	129.2	133.3	137.0	140.2	143.0	145.6
144	126.2	131.0	135.2	138.9	142.1	145.0	147.6
146	127.9	132.8	137.1	140.8	144.1	147.0	149.7
148	129.7	134.7	139.0	142.7	146.1	149.1	151.7

TABLE 22 **Stump and Breast Height Diameter Tables for: Western Yellow Pine all ages in Forest Inventory Zones A to L**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.9	9.4	9.9	10.3	10.6	10.9	11.2
12	10.7	11.3	11.9	12.4	12.8	13.1	13.4
14	12.4	13.2	13.9	14.4	14.9	15.3	15.7
16	14.2	15.1	15.9	16.5	17.0	17.5	17.9
18	16.0	17.0	17.8	18.5	19.2	19.7	20.1
20	17.8	18.9	19.8	20.6	21.3	21.9	22.4
22	19.6	20.8	21.8	22.7	23.4	24.1	24.6
24	21.3	22.7	23.8	24.7	25.6	26.3	26.9
26	23.1	24.6	25.8	26.8	27.7	28.4	29.1
28	24.9	26.4	27.7	28.9	29.8	30.6	31.3
30	26.7	28.3	29.7	30.9	31.9	32.8	33.6
32	28.5	30.2	31.7	33.0	34.1	35.0	35.8
34	30.2	32.1	33.7	35.0	36.2	37.2	38.1
36	32.0	34.0	35.7	37.1	38.3	39.4	40.3
38	33.8	35.9	37.7	39.2	40.5	41.6	42.5
40	35.6	37.8	39.6	41.2	42.6	43.8	44.8
42	37.3	39.7	41.6	43.3	44.7	45.9	47.0
44	39.1	41.5	43.6	45.3	46.8	48.1	49.2
46	40.9	43.4	45.6	47.4	49.0	50.3	51.5
48	42.7	45.3	47.6	49.5	51.1	52.5	53.7
50	44.5	47.2	49.5	51.5	53.2	54.7	56.0
52	46.2	49.1	51.5	53.6	55.4	56.9	58.2
54	48.0	51.0	53.5	55.6	57.5	59.1	60.4
56	49.8	52.9	55.5	57.7	59.6	61.3	62.7
58	51.6	54.8	57.5	59.8	61.7	63.4	64.9
60	53.4	56.7	59.5	61.8	63.9	65.6	67.2
62	55.1	58.5	61.4	63.9	66.0	67.8	69.4
64	56.9	60.4	63.4	66.0	68.1	70.0	71.6
66	58.7	62.3	65.4	68.0	70.3	72.2	73.9
68	60.5	64.2	67.4	70.1	72.4	74.4	76.1
70	62.2	66.1	69.4	72.1	74.5	76.6	78.4
72	64.0	68.0	71.3	74.2	76.7	78.8	80.6
74	65.8	69.9	73.3	76.3	78.8	81.0	82.8
76	67.6	71.8	75.3	78.3	80.9	83.1	85.1
78	69.4	73.7	77.3	80.4	83.0	85.3	87.3

Equation Used:
DBH=DSIB+0.154163*DSIB*(2.3-SH)+0.638001*DSIB*Ln((SH+1.0)/2.3)
Based on 671 Trees. Standard Error of Estimated DBH = 3.18 cm

TABLE 22 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	71.1	75.5	79.3	82.4	85.2	87.5	89.5
82	72.9	77.4	81.3	84.5	87.3	89.7	91.8
84	74.7	79.3	83.2	86.6	89.4	91.9	94.0
86	76.5	81.2	85.2	88.6	91.6	94.1	96.3
88	78.3	83.1	87.2	90.7	93.7	96.3	98.5
90	80.0	85.0	89.2	92.7	95.8	98.5	100.7
92	81.8	86.9	91.2	94.8	97.9	100.6	103.0
94	83.6	88.8	93.1	96.9	100.1	102.8	105.2
96	85.4	90.7	95.1	98.9	102.2	105.0	107.5
98	87.1	92.5	97.1	101.0	104.3	107.2	109.7
100	88.9	94.4	99.1	103.1	106.5	109.4	111.9
102	90.7	96.3	101.1	105.1	108.6	111.6	114.2
104	92.5	98.2	103.0	107.2	110.7	113.8	116.4
106	94.3	100.1	105.0	109.2	112.8	116.0	118.6
108	96.0	102.0	107.0	111.3	115.0	118.1	120.9
110	97.8	103.9	109.0	113.4	117.1	120.3	123.1
112	99.6	105.8	111.0	115.4	119.2	122.5	125.4
114	101.4	107.7	113.0	117.5	121.4	124.7	127.6
116	103.1	109.5	114.9	119.5	123.5	126.9	129.8
118	104.9	111.4	116.9	121.6	125.6	129.1	132.1
120	106.7	113.3	118.9	123.7	127.8	131.3	134.3
122	108.5	115.2	120.9	125.7	129.9	133.5	136.6
124	110.3	117.1	122.9	127.8	132.0	135.6	138.8
126	112.0	119.0	124.8	129.8	134.1	137.8	141.0
128	113.8	120.9	126.8	131.9	136.3	140.0	143.3
130	115.6	122.8	128.8	134.0	138.4	142.2	145.5
132	117.4	124.6	130.8	136.0	140.5	144.4	147.7
134	119.2	126.5	132.8	138.1	142.7	146.6	150.0
136	120.9	128.4	134.8	140.2	144.8	148.8	152.2
138	122.7	130.3	136.7	142.2	146.9	151.0	154.5
140	124.5	132.2	138.7	144.3	149.0	153.2	156.7
142	126.3	134.1	140.7	146.3	151.2	155.3	158.9
144	128.0	136.0	142.7	148.4	153.3	157.5	161.2
146	129.8	137.9	144.7	150.5	155.4	159.7	163.4
148	131.6	139.8	146.6	152.5	157.6	161.9	165.7

TABLE 22 (Concluded)

Diameter Breast Height Outside Bark in cm							
DSIB	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	133.4	141.6	148.6	154.6	159.7	164.1	167.9
152	135.2	143.5	150.6	156.6	161.8	166.3	170.1
154	136.9	145.4	152.6	158.7	163.9	168.5	172.4
156	138.7	147.3	154.6	160.8	166.1	170.7	174.6
158	140.5	149.2	156.6	162.8	168.2	172.8	176.8
160	142.3	151.1	158.5	164.9	170.3	175.0	179.1
162	144.1	153.0	160.5	166.9	172.5	177.2	181.3
164	145.8	154.9	162.5	169.0	174.6	179.4	183.6
166	147.6	156.8	164.5	171.1	176.7	181.6	185.8
168	149.4	158.6	166.5	173.1	178.9	183.8	188.0
170	151.2	160.5	168.4	175.2	181.0	186.0	190.3
172	152.9	162.4	170.4	177.3	183.1	188.2	192.5
174	154.7	164.3	172.4	179.3	185.2	190.3	194.8
176	156.5	166.2	174.4	181.4	187.4	192.5	197.0
178	158.3	168.1	176.4	183.4	189.5	194.7	199.2
180	160.1	170.0	178.4	185.5	191.6	196.9	201.5
182	161.8	171.9	180.3	187.6	193.8	199.1	203.7
184	163.6	173.8	182.3	189.6	195.9	201.3	205.9
186	165.4	175.6	184.3	191.7	198.0	203.5	208.2
188	167.2	177.5	186.3	193.7	200.1	205.7	210.4
190	169.0	179.4	188.3	195.8	202.3	207.8	212.7
192	170.7	181.3	190.2	197.9	204.4	210.0	214.9
194	172.5	183.2	192.2	199.9	206.5	212.2	217.1
196	174.3	185.1	194.2	202.0	208.7	214.4	219.4
198	176.1	187.0	196.2	204.0	210.8	216.6	221.6
200	177.8	188.9	198.2	206.1	212.9	218.8	223.9
202	179.6	190.8	200.2	208.2	215.0	221.0	226.1
204	181.4	192.6	202.1	210.2	217.2	223.2	228.3
206	183.2	194.5	204.1	212.3	219.3	225.4	230.6
208	185.0	196.4	206.1	214.4	221.4	227.5	232.8
210	186.7	198.3	208.1	216.4	223.6	229.7	235.1
212	188.5	200.2	210.1	218.5	225.7	231.9	237.3
214	190.3	202.1	212.0	220.5	227.8	234.1	239.5
216	192.1	204.0	214.0	222.6	230.0	236.3	241.8
218	193.9	205.9	216.0	224.7	232.1	238.5	244.0

Equation Used:
DBH=DSIB+0.154163*DSIB*(2.3-SH)+0.638001*DSIB*Ln((SH+1.0)/2.3)
Based on 671 Trees. Standard Error of Estimated DBH = 3.18 cm

TABLE 23 **Stump and Breast Height Diameter Tables for: Western Larch all ages in Forest Inventory Zones A to J**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	9.4	9.9	10.4	10.8	11.1	11.4	11.6
12	11.2	11.9	12.4	12.9	13.3	13.6	13.9
14	13.1	13.9	14.5	15.1	15.5	15.9	16.2
16	15.0	15.9	16.6	17.2	17.7	18.2	18.5
18	16.8	17.8	18.7	19.4	19.9	20.4	20.9
20	18.7	19.8	20.7	21.5	22.2	22.7	23.2
22	20.6	21.8	22.8	23.7	24.4	25.0	25.5
24	22.5	23.8	24.9	25.8	26.6	27.3	27.8
26	24.3	25.8	27.0	28.0	28.8	29.5	30.1
28	26.2	27.7	29.0	30.1	31.0	31.8	32.5
30	28.1	29.7	31.1	32.3	33.2	34.1	34.8
32	29.9	31.7	33.2	34.4	35.5	36.3	37.1
34	31.8	33.7	35.3	36.6	37.7	38.6	39.4
36	33.7	35.7	37.3	38.7	39.9	40.9	41.7
38	35.6	37.7	39.4	40.9	42.1	43.2	44.0
40	37.4	39.6	41.5	43.0	44.3	45.4	46.4
42	39.3	41.6	43.5	45.2	46.5	47.7	48.7
44	41.2	43.6	45.6	47.3	48.8	50.0	51.0
46	43.0	45.6	47.7	49.5	51.0	52.2	53.3
48	44.9	47.6	49.8	51.6	53.2	54.5	55.6
50	46.8	49.5	51.8	53.8	55.4	56.8	58.0
52	48.7	51.5	53.9	55.9	57.6	59.1	60.3
54	50.5	53.5	56.0	58.1	59.8	61.3	62.6
56	52.4	55.5	58.1	60.2	62.1	63.6	64.9
58	54.3	57.5	60.1	62.4	64.3	65.9	67.2
60	56.1	59.5	62.2	64.5	66.5	68.1	69.5
62	58.0	61.4	64.3	66.7	68.7	70.4	71.9
64	59.9	63.4	66.4	68.8	70.9	72.7	74.2
66	61.8	65.4	68.4	71.0	73.1	75.0	76.5
68	63.6	67.4	70.5	73.1	75.4	77.2	78.8
70	65.5	69.4	72.6	75.3	77.6	79.5	81.1
72	67.4	71.3	74.7	77.4	79.8	81.8	83.4
74	69.2	73.3	76.7	79.6	82.0	84.0	85.8
76	71.1	75.3	78.8	81.7	84.2	86.3	88.1
78	73.0	77.3	80.9	83.9	86.4	88.6	90.4

Equation Used:
DBH=DSIB+0.190001*DSIB*(2.3-SH)+0.682016*DSIB*Ln((SH+1.0)/2.3)
Based on 806 Trees. Standard Error of Estimated DBH = 4.06 cm

TABLE 23 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	74.9	79.3	82.9	86.0	88.6	90.9	92.7
82	76.7	81.3	85.0	88.2	90.9	93.1	95.0
84	78.6	83.2	87.1	90.3	93.1	95.4	97.4
86	80.5	85.2	89.2	92.5	95.3	97.7	99.7
88	82.3	87.2	91.2	94.6	97.5	99.9	102.0
90	84.2	89.2	93.3	96.8	99.7	102.2	104.3
92	86.1	91.2	95.4	98.9	101.9	104.5	106.6
94	88.0	93.1	97.5	101.1	104.2	106.8	108.9
96	89.8	95.1	99.5	103.2	106.4	109.0	111.3
98	91.7	97.1	101.6	105.4	108.6	111.3	113.6
100	93.6	99.1	103.7	107.5	110.8	113.6	115.9
102	95.4	101.1	105.8	109.7	113.0	115.8	118.2
104	97.3	103.1	107.8	111.9	115.2	118.1	120.5
106	99.2	105.0	109.9	114.0	117.5	120.4	122.9
108	101.1	107.0	112.0	116.2	119.7	122.7	125.2
110	102.9	109.0	114.1	118.3	121.9	124.9	127.5
112	104.8	111.0	116.1	120.5	124.1	127.2	129.8
114	106.7	113.0	118.2	122.6	126.3	129.5	132.1
116	108.5	114.9	120.3	124.8	128.5	131.7	134.4
118	110.4	116.9	122.3	126.9	130.8	134.0	136.8
120	112.3	118.9	124.4	129.1	133.0	136.3	139.1
122	114.2	120.9	126.5	131.2	135.2	138.6	141.4
124	116.0	122.9	128.6	133.4	137.4	140.8	143.7
126	117.9	124.9	130.6	135.5	139.6	143.1	146.0
128	119.8	126.8	132.7	137.7	141.8	145.4	148.4
130	121.6	128.8	134.8	139.8	144.1	147.6	150.7
132	123.5	130.8	136.9	142.0	146.3	149.9	153.0
134	125.4	132.8	138.9	144.1	148.5	152.2	155.3
136	127.3	134.8	141.0	146.3	150.7	154.5	157.6
138	129.1	136.7	143.1	148.4	152.9	156.7	159.9
140	131.0	138.7	145.2	150.6	155.1	159.0	162.3
142	132.9	140.7	147.2	152.7	157.4	161.3	164.6
144	134.8	142.7	149.3	154.9	159.6	163.5	166.9
146	136.6	144.7	151.4	157.0	161.8	165.8	169.2
148	138.5	146.7	153.5	159.2	164.0	168.1	171.5

TABLE 23 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	140.4	148.6	155.5	161.3	166.2	170.4	173.9
152	142.2	150.6	157.6	163.5	168.4	172.6	176.2
154	144.1	152.6	159.7	165.6	170.6	174.9	178.5
156	146.0	154.6	161.7	167.8	172.9	177.2	180.8
158	147.9	156.6	163.8	169.9	175.1	179.4	183.1
160	149.7	158.5	165.9	172.1	177.3	181.7	185.4
162	151.6	160.5	168.0	174.2	179.5	184.0	187.8
164	153.5	162.5	170.0	176.4	181.7	186.3	190.1
166	155.3	164.5	172.1	178.5	183.9	188.5	192.4
168	157.2	166.5	174.2	180.7	186.2	190.8	194.7
170	159.1	168.4	176.3	182.8	188.4	193.1	197.0
172	161.0	170.4	178.3	185.0	190.6	195.3	199.4
174	162.8	172.4	180.4	187.1	192.8	197.6	201.7
176	164.7	174.4	182.5	189.3	195.0	199.9	204.0
178	166.6	176.4	184.6	191.4	197.2	202.2	206.3
180	168.4	178.4	186.6	193.6	199.5	204.4	208.6
182	170.3	180.3	188.7	195.7	201.7	206.7	210.9
184	172.2	182.3	190.8	197.9	203.9	209.0	213.3
186	174.1	184.3	192.9	200.0	206.1	211.2	215.6
188	175.9	186.3	194.9	202.2	208.3	213.5	217.9
190	177.8	188.3	197.0	204.3	210.5	215.8	220.2
192	179.7	190.2	199.1	206.5	212.8	218.1	222.5
194	181.5	192.2	201.2	208.6	215.0	220.3	224.9
196	183.4	194.2	203.2	210.8	217.2	222.6	227.2
198	185.3	196.2	205.3	212.9	219.4	224.9	229.5
200	187.2	198.2	207.4	215.1	221.6	227.1	231.8
202	189.0	200.2	209.4	217.2	223.8	229.4	234.1
204	190.9	202.1	211.5	219.4	226.1	231.7	236.4
206	192.8	204.1	213.6	221.6	228.3	234.0	238.8
208	194.6	206.1	215.7	223.7	230.5	236.2	241.1
210	196.5	208.1	217.7	225.9	232.7	238.5	243.4
212	198.4	210.1	219.8	228.0	234.9	240.8	245.7
214	200.3	212.0	221.9	230.2	237.1	243.0	248.0
216	202.1	214.0	224.0	232.3	239.4	245.3	250.3
218	204.0	216.0	226.0	234.5	241.6	247.6	252.7

Equation Used:
DBH=DSIB+0.190001*DSIB*(2.3-SH)+0.682016*DSIB*Ln((SH+1.0)/2.3)
Based on 806 Trees. Standard Error of Estimated DBH = 4.06 cm

TABLE 24 **Stump and Breast Height Diameter Tables for: Western Larch all ages in Forest Inventory Zones K and L**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.0	8.5	9.0	9.4	9.8	10.1	10.4
12	9.6	10.2	10.8	11.3	11.7	12.1	12.4
14	11.2	12.0	12.6	13.2	13.7	14.1	14.5
16	12.8	13.7	14.4	15.1	15.6	16.1	16.6
18	14.4	15.4	16.2	16.9	17.6	18.2	18.7
20	16.0	17.1	18.0	18.8	19.5	20.2	20.7
22	17.6	18.8	19.8	20.7	21.5	22.2	22.8
24	19.2	20.5	21.6	22.6	23.4	24.2	24.9
26	20.8	22.2	23.4	24.5	25.4	26.2	27.0
28	22.4	23.9	25.2	26.3	27.3	28.2	29.0
30	24.0	25.6	27.0	28.2	29.3	30.3	31.1
32	25.6	27.3	28.8	30.1	31.3	32.3	33.2
34	27.2	29.0	30.6	32.0	33.2	34.3	35.3
36	28.8	30.7	32.4	33.9	35.2	36.3	37.3
38	30.4	32.4	34.2	35.8	37.1	38.3	39.4
40	32.0	34.2	36.0	37.6	39.1	40.3	41.5
42	33.6	35.9	37.8	39.5	41.0	42.4	43.6
44	35.2	37.6	39.6	41.4	43.0	44.4	45.6
46	36.8	39.3	41.4	43.3	44.9	46.4	47.7
48	38.4	41.0	43.2	45.2	46.9	48.4	49.8
50	40.0	42.7	45.0	47.0	48.8	50.4	51.9
52	41.6	44.4	46.8	48.9	50.8	52.5	53.9
54	43.2	46.1	48.6	50.8	52.7	54.5	56.0
56	44.8	47.8	50.4	52.7	54.7	56.5	58.1
58	46.4	49.5	52.2	54.6	56.7	58.5	60.2
60	48.0	51.2	54.0	56.5	58.6	60.5	62.2
62	49.6	52.9	55.8	58.3	60.6	62.5	64.3
64	51.2	54.6	57.6	60.2	62.5	64.6	66.4
66	52.8	56.4	59.4	62.1	64.5	66.6	68.5
68	54.4	58.1	61.2	64.0	66.4	68.6	70.5
70	56.0	59.8	63.0	65.9	68.4	70.6	72.6
72	57.6	61.5	64.8	67.7	70.3	72.6	74.7
74	59.2	63.2	66.6	69.6	72.3	74.6	76.8
76	60.8	64.9	68.4	71.5	74.2	76.7	78.8
78	62.4	66.6	70.2	73.4	76.2	78.7	80.9

Equation Used:
DBH=DSIB+0.078977*DSIB*(2.3-SH)+0.532930*DSIB*Ln((SH+1.0)/2.3)
Based on 203 Trees. Standard Error of Estimated DBH = 0.91 cm

TABLE 24 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	64.0	68.3	72.0	75.3	78.1	80.7	83.0
82	65.6	70.0	73.8	77.2	80.1	82.7	85.1
84	67.2	71.7	75.6	79.0	82.0	84.7	87.1
86	68.8	73.4	77.4	80.9	84.0	86.8	89.2
88	70.4	75.1	79.2	82.8	86.0	88.8	91.3
90	72.0	76.9	81.0	84.7	87.9	90.8	93.4
92	73.6	78.6	82.8	86.6	89.9	92.8	95.4
94	75.2	80.3	84.6	88.4	91.8	94.8	97.5
96	76.8	82.0	86.4	90.3	93.8	96.8	99.6
98	78.4	83.7	88.2	92.2	95.7	98.9	101.7
100	80.0	85.4	90.0	94.1	97.7	100.9	103.7
102	81.6	87.1	91.8	96.0	99.6	102.9	105.8
104	83.2	88.8	93.6	97.8	101.6	104.9	107.9
106	84.8	90.5	95.4	99.7	103.5	106.9	110.0
108	86.4	92.2	97.2	101.6	105.5	108.9	112.0
110	88.0	93.9	99.0	103.5	107.4	111.0	114.1
112	89.6	95.6	100.8	105.4	109.4	113.0	116.2
114	91.2	97.3	102.6	107.3	111.4	115.0	118.3
116	92.8	99.1	104.4	109.1	113.3	117.0	120.3
118	94.4	100.8	106.2	111.0	115.3	119.0	122.4
120	96.0	102.5	108.0	112.9	117.2	121.0	124.5
122	97.6	104.2	109.8	114.8	119.2	123.1	126.6
124	99.2	105.9	111.6	116.7	121.1	125.1	128.6
126	100.9	107.6	113.4	118.5	123.1	127.1	130.7
128	102.5	109.3	115.2	120.4	125.0	129.1	132.8
130	104.1	111.0	117.0	122.3	127.0	131.1	134.9
132	105.7	112.7	118.8	124.2	128.9	133.2	136.9
134	107.3	114.4	120.6	126.1	130.9	135.2	139.0
136	108.9	116.1	122.4	128.0	132.8	137.2	141.1
138	110.5	117.8	124.2	129.8	134.8	139.2	143.2
140	112.1	119.5	126.0	131.7	136.7	141.2	145.2
142	113.7	121.3	127.8	133.6	138.7	143.2	147.3
144	115.3	123.0	129.6	135.5	140.7	145.3	149.4
146	116.9	124.7	131.4	137.4	142.6	147.3	151.5
148	118.5	126.4	133.2	139.2	144.6	149.3	153.5

TABLE 24 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	120.1	128.1	135.0	141.1	146.5	151.3	155.6
152	121.7	129.8	136.8	143.0	148.5	153.3	157.7
154	123.3	131.5	138.6	144.9	150.4	155.3	159.8
156	124.9	133.2	140.4	146.8	152.4	157.4	161.8
158	126.5	134.9	142.2	148.7	154.3	159.4	163.9
160	128.1	136.6	144.0	150.5	156.3	161.4	166.0
162	129.7	138.3	145.8	152.4	158.2	163.4	168.1
164	131.3	140.0	147.6	154.3	160.2	165.4	170.1
166	132.9	141.7	149.4	156.2	162.1	167.5	172.2
168	134.5	143.5	151.2	158.1	164.1	169.5	174.3
170	136.1	145.2	153.0	159.9	166.1	171.5	176.4
172	137.7	146.9	154.8	161.8	168.0	173.5	178.4
174	139.3	148.6	156.6	163.7	170.0	175.5	180.5
176	140.9	150.3	158.4	165.6	171.9	177.5	182.6
178	142.5	152.0	160.2	167.5	173.9	179.6	184.7
180	144.1	153.7	162.0	169.4	175.8	181.6	186.7
182	145.7	155.4	163.8	171.2	177.8	183.6	188.8
184	147.3	157.1	165.6	173.1	179.7	185.6	190.9
186	148.9	158.8	167.4	175.0	181.7	187.6	193.0
188	150.5	160.5	169.2	176.9	183.6	189.6	195.0
190	152.1	162.2	171.0	178.8	185.6	191.7	197.1
192	153.7	163.9	172.8	180.6	187.5	193.7	199.2
194	155.3	165.7	174.6	182.5	189.5	195.7	201.3
196	156.9	167.4	176.4	184.4	191.4	197.7	203.3
198	158.5	169.1	178.2	186.3	193.4	199.7	205.4
200	160.1	170.8	180.0	188.2	195.4	201.7	207.5
202	161.7	172.5	181.8	190.1	197.3	203.8	209.6
204	163.3	174.2	183.6	191.9	199.3	205.8	211.6
206	164.9	175.9	185.4	193.8	201.2	207.8	213.7
208	166.5	177.6	187.3	195.7	203.2	209.8	215.8
210	168.1	179.3	189.1	197.6	205.1	211.8	217.9
212	169.7	181.0	190.9	199.5	207.1	213.9	219.9
214	171.3	182.7	192.7	201.3	209.0	215.9	222.0
216	172.9	184.4	194.5	203.2	211.0	217.9	224.1
218	174.5	186.1	196.3	205.1	212.9	219.9	226.2

Equation Used:
DBH=DSIB+0.078977*DSIB*(2.3-SH)+0.532930*DSIB*Ln((SH+1.0)/2.3)
Based on 203 Trees. Standard Error of Estimated DBH = 0.91 cm

TABLE 25 **Stump and Breast Height Diameter Tables for: Black Cottonwood** all ages in Forest Inventory Zones A ot J

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.6	9.1	9.6	9.9	10.3	10.6	10.8
12	10.3	10.9	11.5	11.9	12.3	12.7	13.0
14	12.0	12.8	13.4	13.9	14.4	14.8	15.1
16	13.8	14.6	15.3	15.9	16.4	16.9	17.3
18	15.5	16.4	17.2	17.9	18.5	19.0	19.5
20	17.2	18.2	19.1	19.9	20.5	21.1	21.6
22	18.9	20.1	21.0	21.9	22.6	23.2	23.8
24	20.6	21.9	22.9	23.9	24.7	25.3	26.0
26	22.4	23.7	24.9	25.8	26.7	27.5	28.1
28	24.1	25.5	26.8	27.8	28.8	29.6	30.3
30	25.8	27.4	28.7	29.8	30.8	31.7	32.4
32	27.5	29.2	30.6	31.8	32.9	33.8	34.6
34	29.2	31.0	32.5	33.8	34.9	35.9	36.8
36	31.0	32.8	34.4	35.8	37.0	38.0	38.9
38	32.7	34.6	36.3	37.8	39.0	40.1	41.1
40	34.4	36.5	38.2	39.8	41.1	42.2	43.3
42	36.1	38.3	40.2	41.7	43.1	44.4	45.4
44	37.8	40.1	42.1	43.7	45.2	46.5	47.6
46	39.6	41.9	44.0	45.7	47.2	48.6	49.7
48	41.3	43.8	45.9	47.7	49.3	50.7	51.9
50	43.0	45.6	47.8	49.7	51.4	52.8	54.1
52	44.7	47.4	49.7	51.7	53.4	54.9	56.2
54	46.4	49.2	51.6	53.7	55.5	57.0	58.4
56	48.2	51.1	53.5	55.7	57.5	59.1	60.6
58	49.9	52.9	55.4	57.7	59.6	61.2	62.7
60	51.6	54.7	57.4	59.6	61.6	63.4	64.9
62	53.3	56.5	59.3	61.6	63.7	65.5	67.0
64	55.0	58.4	61.2	63.6	65.7	67.6	69.2
66	56.8	60.2	63.1	65.6	67.8	69.7	71.4
68	58.5	62.0	65.0	67.6	69.8	71.8	73.5
70	60.2	63.8	66.9	69.6	71.9	73.9	75.7
72	61.9	65.7	68.8	71.6	74.0	76.0	77.9
74	63.6	67.5	70.7	73.6	76.0	78.1	80.0
76	65.4	69.3	72.7	75.5	78.1	80.3	82.2
78	67.1	71.1	74.6	77.5	80.1	82.4	84.3

Equation Used:
DBH=DSIB+0.117130*DSIB*(2.3-SH)+0.565108*DSIB*Ln((SH+1.0)/2.3)
Based on 347 Trees. Standard Error of Estimated DBH = 3.19 cm

TABLE 25 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	68.8	72.9	76.5	79.5	82.2	84.5	86.5
82	70.5	74.8	78.4	81.5	84.2	86.6	88.7
84	72.3	76.6	80.3	83.5	86.3	88.7	90.8
86	74.0	78.4	82.2	85.5	88.3	90.8	93.0
88	75.7	80.2	84.1	87.5	90.4	92.9	95.2
90	77.4	82.1	86.0	89.5	92.4	95.0	97.3
92	79.1	83.9	88.0	91.5	94.5	97.2	99.5
94	80.9	85.7	89.9	93.4	96.5	99.3	101.7
96	82.6	87.5	91.8	95.4	98.6	101.4	103.8
98	84.3	89.4	93.7	97.4	100.7	103.5	106.0
100	86.0	91.2	95.6	99.4	102.7	105.6	108.1
102	87.7	93.0	97.5	101.4	104.8	107.7	110.3
104	89.5	94.8	99.4	103.4	106.8	109.8	112.5
106	91.2	96.7	101.3	105.4	108.9	111.9	114.6
108	92.9	98.5	103.2	107.4	110.9	114.0	116.8
110	94.6	100.3	105.2	109.3	113.0	116.2	119.0
112	96.3	102.1	107.1	111.3	115.0	118.3	121.1
114	98.1	103.9	109.0	113.3	117.1	120.4	123.3
116	99.8	105.8	110.9	115.3	119.1	122.5	125.4
118	101.5	107.6	112.8	117.3	121.2	124.6	127.6
120	103.2	109.4	114.7	119.3	123.3	126.7	129.8
122	104.9	111.2	116.6	121.3	125.3	128.8	131.9
124	106.7	113.1	118.5	123.3	127.4	130.9	134.1
126	108.4	114.9	120.5	125.2	129.4	133.1	136.3
128	110.1	116.7	122.4	127.2	131.5	135.2	138.4
130	111.8	118.5	124.3	129.2	133.5	137.3	140.6
132	113.5	120.4	126.2	131.2	135.6	139.4	142.7
134	115.3	122.2	128.1	133.2	137.6	141.5	144.9
136	117.0	124.0	130.0	135.2	139.7	143.6	147.1
138	118.7	125.8	131.9	137.2	141.7	145.7	149.2
140	120.4	127.7	133.8	139.2	143.8	147.8	151.4
142	122.1	129.5	135.7	141.2	145.8	150.0	153.6
144	123.9	131.3	137.7	143.1	147.9	152.1	155.7
146	125.6	133.1	139.6	145.1	150.0	154.2	157.9
148	127.3	135.0	141.5	147.1	152.0	156.3	160.0

TABLE 25 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	129.0	136.8	143.4	149.1	154.1	158.4	162.2
152	130.7	138.6	145.3	151.1	156.1	160.5	164.4
154	132.5	140.4	147.2	153.1	158.2	162.6	166.5
156	134.2	142.2	149.1	155.1	160.2	164.7	168.7
158	135.9	144.1	151.0	157.1	162.3	166.9	170.9
160	137.6	145.9	153.0	159.0	164.3	169.0	173.0
162	139.3	147.7	154.9	161.0	166.4	171.1	175.2
164	141.1	149.5	156.8	163.0	168.4	173.2	177.3
166	142.8	151.4	158.7	165.0	170.5	175.3	179.5
168	144.5	153.2	160.6	167.0	172.6	177.4	181.7
170	146.2	155.0	162.5	169.0	174.6	179.5	183.8
172	147.9	156.8	164.4	171.0	176.7	181.6	186.0
174	149.7	158.7	166.3	173.0	178.7	183.7	188.2
176	151.4	160.5	168.3	175.0	180.8	185.9	190.3
178	153.1	162.3	170.2	176.9	182.8	188.0	192.5
180	154.8	164.1	172.1	178.9	184.9	190.1	194.6
182	156.5	166.0	174.0	180.9	186.9	192.2	196.8
184	158.3	167.8	175.9	182.9	189.0	194.3	199.0
186	160.0	169.6	177.8	184.9	191.0	196.4	201.1
188	161.7	171.4	179.7	186.9	193.1	198.5	203.3
190	163.4	173.2	181.6	188.9	195.2	200.6	205.5
192	165.1	175.1	183.5	190.9	197.2	202.8	207.6
194	166.9	176.9	185.5	192.8	199.3	204.9	209.8
196	168.6	178.7	187.4	194.8	201.3	207.0	212.0
198	170.3	180.5	189.3	196.8	203.4	209.1	214.1
200	172.0	182.4	191.2	198.8	205.4	211.2	216.3
202	173.7	184.2	193.1	200.8	207.5	213.3	218.4
204	175.5	186.0	195.0	202.8	209.5	215.4	220.6
206	177.2	187.8	196.9	204.8	211.6	217.5	222.8
208	178.9	189.7	198.8	206.8	213.6	219.7	224.9
210	180.6	191.5	200.8	208.7	215.7	221.8	227.1
212	182.3	193.3	202.7	210.7	217.7	223.9	229.3
214	184.1	195.1	204.6	212.7	219.8	226.0	231.4
216	185.8	197.0	206.5	214.7	221.9	228.1	233.6
218	187.5	198.8	208.4	216.7	223.9	230.2	235.7

Equation Used:
DBH=DSIB+0.117130*DSIB*(2.3-SH)+0.565108*DSIB*Ln((SH+1.0)/2.3)
Based on 347 Trees. Standard Error of Estimated DBH = 3.19 cm

TABLE 26 **Stump and Breast Height Diameter Tables for: Black Cottonwood all ages in Forest Inventory Zones K and L**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	9.5	9.9	10.2	10.5	10.7	11.0	11.1
12	11.4	11.9	12.3	12.6	12.9	13.1	13.4
14	13.3	13.8	14.3	14.7	15.0	15.3	15.6
16	15.2	15.8	16.3	16.8	17.2	17.5	17.8
18	17.0	17.8	18.4	18.9	19.3	19.7	20.0
20	18.9	19.8	20.4	21.0	21.5	21.9	22.3
22	20.8	21.7	22.5	23.1	23.6	24.1	24.5
24	22.7	23.7	24.5	25.2	25.8	26.3	26.7
26	24.6	25.7	26.6	27.3	27.9	28.5	28.9
28	26.5	27.7	28.6	29.4	30.1	30.7	31.2
30	28.4	29.6	30.7	31.5	32.2	32.9	33.4
32	30.3	31.6	32.7	33.6	34.4	35.0	35.6
34	32.2	33.6	34.7	35.7	36.5	37.2	37.8
36	34.1	35.6	36.8	37.8	38.7	39.4	40.1
38	36.0	37.5	38.8	39.9	40.8	41.6	42.3
40	37.9	39.5	40.9	42.0	43.0	43.8	44.5
42	39.8	41.5	42.9	44.1	45.1	46.0	46.7
44	41.7	43.5	45.0	46.2	47.3	48.2	49.0
46	43.6	45.4	47.0	48.3	49.4	50.4	51.2
48	45.5	47.4	49.0	50.4	51.6	52.6	53.4
50	47.4	49.4	51.1	52.5	53.7	54.8	55.6
52	49.3	51.4	53.1	54.6	55.9	57.0	57.9
54	51.1	53.3	55.2	56.7	58.0	59.1	60.1
56	53.0	55.3	57.2	58.8	60.2	61.3	62.3
58	54.9	57.3	59.3	60.9	62.3	63.5	64.5
60	56.8	59.3	61.3	63.0	64.5	65.7	66.8
62	58.7	61.2	63.4	65.1	66.6	67.9	69.0
64	60.6	63.2	65.4	67.2	68.8	70.1	71.2
66	62.5	65.2	67.4	69.3	70.9	72.3	73.4
68	64.4	67.2	69.5	71.4	73.1	74.5	75.7
70	66.3	69.1	71.5	73.5	75.2	76.7	77.9
72	68.2	71.1	73.6	75.6	77.4	78.9	80.1
74	70.1	73.1	75.6	77.7	79.5	81.1	82.3
76	72.0	75.1	77.7	79.8	81.7	83.2	84.6
78	73.9	77.1	79.7	81.9	83.8	85.4	86.8

Equation Used:
DBH=DSIB+0.136074*DSIB*(2.3-SH)+0.498340*DSIB*Ln((SH+1.0)/2.3)
Based on 573 Trees. Standard Error of Estimated DBH = 1.80 cm

TABLE 26 (Continued)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	75.8	79.0	81.7	84.0	86.0	87.6	89.0
82	77.7	81.0	83.8	86.1	88.1	89.8	91.2
84	79.6	83.0	85.8	88.2	90.3	92.0	93.5
86	81.5	85.0	87.9	90.3	92.4	94.2	95.7
88	83.3	86.9	89.9	92.4	94.6	96.4	97.9
90	85.2	88.9	92.0	94.5	96.7	98.6	100.1
92	87.1	90.9	94.0	96.6	98.9	100.8	102.4
94	89.0	92.9	96.1	98.7	101.0	103.0	104.6
96	90.9	94.8	98.1	100.8	103.2	105.1	106.8
98	92.8	96.8	100.1	102.9	105.3	107.3	109.0
100	94.7	98.8	102.2	105.0	107.5	109.5	111.3
102	96.6	100.8	104.2	107.1	109.6	111.7	113.5
104	98.5	102.7	106.3	109.2	111.8	113.9	115.7
106	100.4	104.7	108.3	111.4	113.9	116.1	118.0
108	102.3	106.7	110.4	113.5	116.1	118.3	120.2
110	104.2	108.7	112.4	115.6	118.2	120.5	122.4
112	106.1	110.6	114.4	117.7	120.4	122.7	124.6
114	108.0	112.6	116.5	119.8	122.5	124.9	126.9
116	109.9	114.6	118.5	121.9	124.7	127.1	129.1
118	111.8	116.6	120.6	124.0	126.8	129.2	131.3
120	113.7	118.5	122.6	126.1	129.0	131.4	133.5
122	115.6	120.5	124.7	128.2	131.1	133.6	135.8
124	117.4	122.5	126.7	130.3	133.3	135.8	138.0
126	119.3	124.5	128.8	132.4	135.4	138.0	140.2
128	121.2	126.4	130.8	134.5	137.6	140.2	142.4
130	123.1	128.4	132.8	136.6	139.7	142.4	144.7
132	125.0	130.4	134.9	138.7	141.9	144.6	146.9
134	126.9	132.4	136.9	140.8	144.0	146.8	149.1
136	128.8	134.3	139.0	142.9	146.2	149.0	151.3
138	130.7	136.3	141.0	145.0	148.3	151.2	153.6
140	132.6	138.3	143.1	147.1	150.5	153.3	155.8
142	134.5	140.3	145.1	149.2	152.6	155.5	158.0
144	136.4	142.2	147.1	151.3	154.8	157.7	160.2
146	138.3	144.2	149.2	153.4	156.9	159.9	162.5
148	140.2	146.2	151.2	155.5	159.1	162.1	164.7

TABLE 26 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
150	142.1	148.2	153.3	157.6	161.2	164.3	166.9
152	144.0	150.1	155.3	159.7	163.4	166.5	169.1
154	145.9	152.1	157.4	161.8	165.5	168.7	171.4
156	147.8	154.1	159.4	163.9	167.7	170.9	173.6
158	149.6	156.1	161.4	166.0	169.8	173.1	175.8
160	151.5	158.1	163.5	168.1	172.0	175.2	178.0
162	153.4	160.0	165.5	170.2	174.1	177.4	180.3
164	155.3	162.0	167.6	172.3	176.3	179.6	182.5
166	157.2	164.0	169.6	174.4	178.4	181.8	184.7
168	159.1	166.0	171.7	176.5	180.6	184.0	186.9
170	161.0	167.9	173.7	178.6	182.7	186.2	189.2
172	162.9	169.9	175.8	180.7	184.9	188.4	191.4
174	164.8	171.9	177.8	182.8	187.0	190.6	193.6
176	166.7	173.9	179.8	184.9	189.2	192.8	195.8
178	168.6	175.8	181.9	187.0	191.3	195.0	198.1
180	170.5	177.8	183.9	189.1	193.4	197.2	200.3
182	172.4	179.8	186.0	191.2	195.6	199.3	202.5
184	174.3	181.8	188.0	193.3	197.7	201.5	204.7
186	176.2	183.7	190.1	195.4	199.9	203.7	207.0
188	178.1	185.7	192.1	197.5	202.0	205.9	209.2
190	180.0	187.7	194.1	199.6	204.2	208.1	211.4
192	181.9	189.7	196.2	201.7	206.3	210.3	213.6
194	183.7	191.6	198.2	203.8	208.5	212.5	215.9
196	185.6	193.6	200.3	205.9	210.6	214.7	218.1
198	187.5	195.6	202.3	208.0	212.8	216.9	220.3
200	189.4	197.6	204.4	210.1	214.9	219.1	222.5
202	191.3	199.5	206.4	212.2	217.1	221.2	224.8
204	193.2	201.5	208.5	214.3	219.2	223.4	227.0
206	195.1	203.5	210.5	216.4	221.4	225.6	229.2
208	197.0	205.5	212.5	218.5	223.5	227.8	231.5
210	198.9	207.4	214.6	220.6	225.7	230.0	233.7
212	200.8	209.4	216.6	222.7	227.8	232.2	235.9
214	202.7	211.4	218.7	224.8	230.0	234.4	238.1
216	204.6	213.4	220.7	226.9	232.1	236.6	240.4
218	206.5	215.3	222.8	229.0	234.3	238.8	242.6

Equation Used:
DBH=DSIB+0.136074*DSIB*(2.3-SH)+0.498340*DSIB*Ln((SH+1.0)/2.3)
Based on 573 Trees. Standard Error of Estimated DBH = 1.80 cm

TABLE 27 **Stump and Breast Height Diameter Tables for: Red Alder all ages in Forest Inventory Zones A to L**

Diameter Breast Height Outside Bark in cm							
DSIB	**Stump Height in m**						
(cm)	**0.15**	**0.30**	**0.45**	**0.60**	**0.75**	**0.90**	**1.05**
10	8.6	9.0	9.3	9.6	9.8	10.1	10.3
12	10.3	10.8	11.2	11.5	11.8	12.1	12.3
14	12.0	12.6	13.0	13.4	13.8	14.1	14.4
16	13.8	14.4	14.9	15.3	15.7	16.1	16.4
18	15.5	16.2	16.7	17.3	17.7	18.1	18.5
20	17.2	17.9	18.6	19.2	19.7	20.1	20.5
22	18.9	19.7	20.5	21.1	21.6	22.1	22.6
24	20.6	21.5	22.3	23.0	23.6	24.2	24.6
26	22.4	23.3	24.2	24.9	25.6	26.2	26.7
28	24.1	25.1	26.0	26.8	27.5	28.2	28.7
30	25.8	26.9	27.9	28.8	29.5	30.2	30.8
32	27.5	28.7	29.8	30.7	31.5	32.2	32.8
34	29.2	30.5	31.6	32.6	33.5	34.2	34.9
36	31.0	32.3	33.5	34.5	35.4	36.2	37.0
38	32.7	34.1	35.3	36.4	37.4	38.2	39.0
40	34.4	35.9	37.2	38.3	39.4	40.3	41.1
42	36.1	37.7	39.1	40.3	41.3	42.3	43.1
44	37.8	39.5	40.9	42.2	43.3	44.3	45.2
46	39.6	41.3	42.8	44.1	45.3	46.3	47.2
48	41.3	43.1	44.6	46.0	47.2	48.3	49.3
50	43.0	44.9	46.5	47.9	49.2	50.3	51.3
52	44.7	46.7	48.4	49.8	51.2	52.3	53.4
54	46.4	48.5	50.2	51.8	53.1	54.3	55.4
56	48.2	50.3	52.1	53.7	55.1	56.4	57.5
58	49.9	52.1	53.9	55.6	57.1	58.4	59.5
60	51.6	53.8	55.8	57.5	59.0	60.4	61.6
62	53.3	55.6	57.7	59.4	61.0	62.4	63.6
64	55.0	57.4	59.5	61.4	63.0	64.4	65.7
66	56.7	59.2	61.4	63.3	64.9	66.4	67.7
68	58.5	61.0	63.2	65.2	66.9	68.4	69.8
70	60.2	62.8	65.1	67.1	68.9	70.4	71.9
72	61.9	64.6	67.0	69.0	70.8	72.5	73.9
74	63.6	66.4	68.8	70.9	72.8	74.5	76.0
76	65.3	68.2	70.7	72.9	74.8	76.5	78.0
78	67.1	70.0	72.5	74.8	76.7	78.5	80.1

Equation Used:
DBH=DSIB+0.055705*DSIB*(2.3-SH)+0.374983*DSIB*Ln((SH+1.0)/2.3)
Based on 546 Trees. Standard Error of Estimated DBH = 1.34 cm

TABLE 27 (Concluded)

Diameter Breast Height Outside Bark in cm							
DSIB	**Stump Height in m**						
(cm)	**0.15**	**0.30**	**0.45**	**0.60**	**0.75**	**0.90**	**1.05**
80	68.8	71.8	74.4	76.7	78.7	80.5	82.1
82	70.5	73.6	76.3	78.6	80.7	82.5	84.2
84	72.2	75.4	78.1	80.5	82.6	84.5	86.2
86	73.9	77.2	80.0	82.4	84.6	86.5	88.3
88	75.7	79.0	81.8	84.4	86.6	88.6	90.3
90	77.4	80.8	83.7	86.3	88.5	90.6	92.4
92	79.1	82.6	85.6	88.2	90.5	92.6	94.4
94	80.8	84.4	87.4	90.1	92.5	94.6	96.5
96	82.5	86.2	89.3	92.0	94.5	96.6	98.5
98	84.3	88.0	91.1	93.9	96.4	98.6	100.6
100	86.0	89.7	93.0	95.9	98.4	100.6	102.6
102	87.7	91.5	94.9	97.8	100.4	102.6	104.7
104	89.4	93.3	96.7	99.7	102.3	104.7	106.8
106	91.1	95.1	98.6	101.6	104.3	106.7	108.8
108	92.9	96.9	100.4	103.5	106.3	108.7	110.9
110	94.6	98.7	102.3	105.4	108.2	110.7	112.9
112	96.3	100.5	104.2	107.4	110.2	112.7	115.0
114	98.0	102.3	106.0	109.3	112.2	114.7	117.0
116	99.7	104.1	107.9	111.2	114.1	116.7	119.1
118	101.5	105.9	109.7	113.1	116.1	118.7	121.1
120	103.2	107.7	111.6	115.0	118.1	120.8	123.2
122	104.9	109.5	113.5	117.0	120.0	122.8	125.2
124	106.6	111.3	115.3	118.9	122.0	124.8	127.3
126	108.3	113.1	117.2	120.8	124.0	126.8	129.3
128	110.1	114.9	119.0	122.7	125.9	128.8	131.4
130	111.8	116.7	120.9	124.6	127.9	130.8	133.4
132	113.5	118.5	122.8	126.5	129.9	132.8	135.5
134	115.2	120.3	124.6	128.5	131.8	134.9	137.5
136	116.9	122.1	126.5	130.4	133.8	136.9	139.6
138	118.7	123.9	128.3	132.3	135.8	138.9	141.7
140	120.4	125.6	130.2	134.2	137.7	140.9	143.7
142	122.1	127.4	132.1	136.1	139.7	142.9	145.8
144	123.8	129.2	133.9	138.0	141.7	144.9	147.8
146	125.5	131.0	135.8	140.0	143.6	146.9	149.9
148	127.3	132.8	137.6	141.9	145.6	148.9	151.9

TABLE 28 **Stump and Breast Height Diameter Tables for: Broadleaf Maple all ages in Forest Inventory Zones A to L**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.5	8.9	9.3	9.6	9.9	10.1	10.3
12	10.2	10.7	11.1	11.5	11.8	12.1	12.4
14	11.9	12.5	13.0	13.4	13.8	14.1	14.5
16	13.6	14.2	14.8	15.3	15.8	16.2	16.5
18	15.3	16.0	16.7	17.2	17.7	18.2	18.6
20	17.0	17.8	18.5	19.2	19.7	20.2	20.7
22	18.6	19.6	20.4	21.1	21.7	22.2	22.7
24	20.3	21.3	22.2	23.0	23.7	24.3	24.8
26	22.0	23.1	24.1	24.9	25.6	26.3	26.9
28	23.7	24.9	25.9	26.8	27.6	28.3	28.9
30	25.4	26.7	27.8	28.7	29.6	30.3	31.0
32	27.1	28.5	29.6	30.6	31.5	32.3	33.0
34	28.8	30.2	31.5	32.6	33.5	34.4	35.1
36	30.5	32.0	33.3	34.5	35.5	36.4	37.2
38	32.2	33.8	35.2	36.4	37.5	38.4	39.2
40	33.9	35.6	37.0	38.3	39.4	40.4	41.3
42	35.6	37.4	38.9	40.2	41.4	42.4	43.4
44	37.3	39.1	40.7	42.1	43.4	44.5	45.4
46	39.0	40.9	42.6	44.0	45.3	46.5	47.5
48	40.7	42.7	44.4	46.0	47.3	48.5	49.6
50	42.4	44.5	46.3	47.9	49.3	50.5	51.6
52	44.1	46.3	48.1	49.8	51.2	52.5	53.7
54	45.8	48.0	50.0	51.7	53.2	54.6	55.8
56	47.5	49.8	51.8	53.6	55.2	56.6	57.8
58	49.2	51.6	53.7	55.5	57.2	58.6	59.9
60	50.9	53.4	55.5	57.5	59.1	60.6	62.0
62	52.5	55.1	57.4	59.4	61.1	62.6	64.0
64	54.2	56.9	59.2	61.3	63.1	64.7	66.1
66	55.9	58.7	61.1	63.2	65.0	66.7	68.2
68	57.6	60.5	63.0	65.1	67.0	68.7	70.2
70	59.3	62.3	64.8	67.0	69.0	70.7	72.3
72	61.0	64.0	66.7	68.9	71.0	72.8	74.4
74	62.7	65.8	68.5	70.9	72.9	74.8	76.4
76	64.4	67.6	70.4	72.8	74.9	76.8	78.5
78	66.1	69.4	72.2	74.7	76.9	78.8	80.6

Equation Used:
DBH=DSIB+0.064992*DSIB*(2.3-SH)+0.421552*DSIB*Ln((SH+1.0)/2.3)
Based on 264 Trees. Standard Error of Estimated DBH = 0.72 cm

TABLE 28 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	67.8	71.2	74.1	76.6	78.8	80.8	82.6
82	69.5	72.9	75.9	78.5	80.8	82.9	84.7
84	71.2	74.7	77.8	80.4	82.8	84.9	86.7
86	72.9	76.5	79.6	82.3	84.8	86.9	88.8
88	74.6	78.3	81.5	84.3	86.7	88.9	90.9
90	76.3	80.1	83.3	86.2	88.7	90.9	92.9
92	78.0	81.8	85.2	88.1	90.7	93.0	95.0
94	79.7	83.6	87.0	90.0	92.6	95.0	97.1
96	81.4	85.4	88.9	91.9	94.6	97.0	99.1
98	83.1	87.2	90.7	93.8	96.6	99.0	101.2
100	84.8	88.9	92.6	95.8	98.6	101.0	103.3
102	86.4	90.7	94.4	97.7	100.5	103.1	105.3
104	88.1	92.5	96.3	99.6	102.5	105.1	107.4
106	89.8	94.3	98.1	101.5	104.5	107.1	109.5
108	91.5	96.1	100.0	103.4	106.4	109.1	111.5
110	93.2	97.8	101.8	105.3	108.4	111.1	113.6
112	94.9	99.6	103.7	107.2	110.4	113.2	115.7
114	96.6	101.4	105.5	109.2	112.4	115.2	117.7
116	98.3	103.2	107.4	111.1	114.3	117.2	119.8
118	100.0	105.0	109.2	113.0	116.3	119.2	121.9
120	101.7	106.7	111.1	114.9	118.3	121.3	123.9
122	103.4	108.5	112.9	116.8	120.2	123.3	126.0
124	105.1	110.3	114.8	118.7	122.2	125.3	128.1
126	106.8	112.1	116.6	120.6	124.2	127.3	130.1
128	108.5	113.9	118.5	122.6	126.1	129.3	132.2
130	110.2	115.6	120.3	124.5	128.1	131.4	134.3
132	111.9	117.4	122.2	126.4	130.1	133.4	136.3
134	113.6	119.2	124.1	128.3	132.1	135.4	138.4
136	115.3	121.0	125.9	130.2	134.0	137.4	140.5
138	117.0	122.7	127.8	132.1	136.0	139.4	142.5
140	118.7	124.5	129.6	134.1	138.0	141.5	144.6
142	120.3	126.3	131.5	136.0	139.9	143.5	146.6
144	122.0	128.1	133.3	137.9	141.9	145.5	148.7
146	123.7	129.9	135.2	139.8	143.9	147.5	150.8
148	125.4	131.6	137.0	141.7	145.9	149.5	152.8

TABLE 29 **Stump and Breast Height Diameter Tables for: Birch Species** all ages in **Forest Inventory Zones A to J**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.4	8.8	9.2	9.5	9.9	10.1	10.4
12	10.0	10.6	11.0	11.5	11.8	12.1	12.4
14	11.7	12.3	12.9	13.4	13.8	14.2	14.5
16	13.4	14.1	14.7	15.3	15.8	16.2	16.6
18	15.1	15.9	16.6	17.2	17.7	18.2	18.6
20	16.7	17.6	18.4	19.1	19.7	20.2	20.7
22	18.4	19.4	20.3	21.0	21.7	22.3	22.8
24	20.1	21.2	22.1	22.9	23.6	24.3	24.9
26	21.7	22.9	23.9	24.8	25.6	26.3	26.9
28	23.4	24.7	25.8	26.7	27.6	28.3	29.0
30	25.1	26.4	27.6	28.6	29.6	30.4	31.1
32	26.8	28.2	29.5	30.6	31.5	32.4	33.2
34	28.4	30.0	31.3	32.5	33.5	34.4	35.2
36	30.1	31.7	33.1	34.4	35.5	36.4	37.3
38	31.8	33.5	35.0	36.3	37.4	38.5	39.4
40	33.5	35.3	36.8	38.2	39.4	40.5	41.4
42	35.1	37.0	38.7	40.1	41.4	42.5	43.5
44	36.8	38.8	40.5	42.0	43.3	44.5	45.6
46	38.5	40.6	42.4	43.9	45.3	46.6	47.7
48	40.1	42.3	44.2	45.8	47.3	48.6	49.7
50	41.8	44.1	46.0	47.7	49.3	50.6	51.8
52	43.5	45.8	47.9	49.7	51.2	52.6	53.9
54	45.2	47.6	49.7	51.6	53.2	54.7	55.9
56	46.8	49.4	51.6	53.5	55.2	56.7	58.0
58	48.5	51.1	53.4	55.4	57.1	58.7	60.1
60	50.2	52.9	55.2	57.3	59.1	60.7	62.2
62	51.9	54.7	57.1	59.2	61.1	62.7	64.2
64	53.5	56.4	58.9	61.1	63.1	64.8	66.3
66	55.2	58.2	60.8	63.0	65.0	66.8	68.4
68	56.9	59.9	62.6	64.9	67.0	68.8	70.5
70	58.5	61.7	64.4	66.8	69.0	70.8	72.5
72	60.2	63.5	66.3	68.8	70.9	72.9	74.6
74	61.9	65.2	68.1	70.7	72.9	74.9	76.7
76	63.6	67.0	70.0	72.6	74.9	76.9	78.7
78	65.2	68.8	71.8	74.5	76.8	78.9	80.8

Equation Used:
DBH=DSIB+0.070797*DSIB*(2.3-SH)+0.455765*DSIB*Ln((SH+1.0)/2.3)
Based on 407 Trees. Standard Error of Estimated DBH = 1.60 cm

TABLE 29 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	66.9	70.5	73.7	76.4	78.8	81.0	82.9
82	68.6	72.3	75.5	78.3	80.8	83.0	85.0
84	70.2	74.1	77.3	80.2	82.8	85.0	87.0
86	71.9	75.8	79.2	82.1	84.7	87.0	89.1
88	73.6	77.6	81.0	84.0	86.7	89.1	91.2
90	75.3	79.3	82.9	85.9	88.7	91.1	93.2
92	76.9	81.1	84.7	87.9	90.6	93.1	95.3
94	78.6	82.9	86.5	89.8	92.6	95.1	97.4
96	80.3	84.6	88.4	91.7	94.6	97.2	99.5
98	82.0	86.4	90.2	93.6	96.5	99.2	101.5
100	83.6	88.2	92.1	95.5	98.5	101.2	103.6
102	85.3	89.9	93.9	97.4	100.5	103.2	105.7
104	87.0	91.7	95.8	99.3	102.5	105.3	107.7
106	88.6	93.4	97.6	101.2	104.4	107.3	109.8
108	90.3	95.2	99.4	103.1	106.4	109.3	111.9
110	92.0	97.0	101.3	105.0	108.4	111.3	114.0
112	93.7	98.7	103.1	107.0	110.3	113.3	116.0
114	95.3	100.5	105.0	108.9	112.3	115.4	118.1
116	97.0	102.3	106.8	110.8	114.3	117.4	120.2
118	98.7	104.0	108.6	112.7	116.3	119.4	122.3
120	100.4	105.8	110.5	114.6	118.2	121.4	124.3
122	102.0	107.6	112.3	116.5	120.2	123.5	126.4
124	103.7	109.3	114.2	118.4	122.2	125.5	128.5
126	105.4	111.1	116.0	120.3	124.1	127.5	130.5
128	107.0	112.8	117.9	122.2	126.1	129.5	132.6
130	108.7	114.6	119.7	124.1	128.1	131.6	134.7
132	110.4	116.4	121.5	126.1	130.0	133.6	136.8
134	112.1	118.1	123.4	128.0	132.0	135.6	138.8
136	113.7	119.9	125.2	129.9	134.0	137.6	140.9
138	115.4	121.7	127.1	131.8	136.0	139.7	143.0
140	117.1	123.4	128.9	133.7	137.9	141.7	145.0
142	118.8	125.2	130.7	135.6	139.9	143.7	147.1
144	120.4	126.9	132.6	137.5	141.9	145.7	149.2
146	122.1	128.7	134.4	139.4	143.8	147.8	151.3
148	123.8	130.5	136.3	141.3	145.8	149.8	153.3

TABLE 30 **Stump and Breast Height Diameter Tables for: Birch Species all ages in Forest Inventory Zones K and L**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.7	9.1	9.4	9.7	10.0	10.2	10.4
12	10.4	10.9	11.3	11.7	12.0	12.3	12.5
14	12.2	12.7	13.2	13.6	14.0	14.3	14.6
16	13.9	14.5	15.1	15.6	16.0	16.3	16.7
18	15.7	16.4	17.0	17.5	18.0	18.4	18.8
20	17.4	18.2	18.9	19.5	20.0	20.4	20.8
22	19.1	20.0	20.7	21.4	22.0	22.5	22.9
24	20.9	21.8	22.6	23.3	24.0	24.5	25.0
26	22.6	23.6	24.5	25.3	26.0	26.6	27.1
28	24.4	25.5	26.4	27.2	28.0	28.6	29.2
30	26.1	27.3	28.3	29.2	30.0	30.6	31.3
32	27.8	29.1	30.2	31.1	32.0	32.7	33.3
34	29.6	30.9	32.1	33.1	33.9	34.7	35.4
36	31.3	32.7	33.9	35.0	35.9	36.8	37.5
38	33.1	34.5	35.8	37.0	37.9	38.8	39.6
40	34.8	36.4	37.7	38.9	39.9	40.9	41.7
42	36.5	38.2	39.6	40.8	41.9	42.9	43.8
44	38.3	40.0	41.5	42.8	43.9	44.9	45.8
46	40.0	41.8	43.4	44.7	45.9	47.0	47.9
48	41.7	43.6	45.3	46.7	47.9	49.0	50.0
50	43.5	45.5	47.2	48.6	49.9	51.1	52.1
52	45.2	47.3	49.0	50.6	51.9	53.1	54.2
54	47.0	49.1	50.9	52.5	53.9	55.2	56.3
56	48.7	50.9	52.8	54.5	55.9	57.2	58.3
58	50.4	52.7	54.7	56.4	57.9	59.2	60.4
60	52.2	54.5	56.6	58.4	59.9	61.3	62.5
62	53.9	56.4	58.5	60.3	61.9	63.3	64.6
64	55.7	58.2	60.4	62.2	63.9	65.4	66.7
66	57.4	60.0	62.2	64.2	65.9	67.4	68.8
68	59.1	61.8	64.1	66.1	67.9	69.5	70.8
70	60.9	63.6	66.0	68.1	69.9	71.5	72.9
72	62.6	65.5	67.9	70.0	71.9	73.5	75.0
74	64.4	67.3	69.8	72.0	73.9	75.6	77.1
76	66.1	69.1	71.7	73.9	75.9	77.6	79.2
78	67.8	70.9	73.6	75.9	77.9	79.7	81.3

Equation Used:
DBH=DSIB+0.070901*DSIB*(2.3-SH)+0.407800*DSIB*Ln((SH+1.0)/2.3)
Based on 285 Trees. Standard Error of Estimated DBH = 0.84 cm

TABLE 30 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	69.6	72.7	75.4	77.8	79.9	81.7	83.3
82	71.3	74.5	77.3	79.7	81.9	83.8	85.4
84	73.1	76.4	79.2	81.7	83.9	85.8	87.5
86	74.8	78.2	81.1	83.6	85.9	87.8	89.6
88	76.5	80.0	83.0	85.6	87.9	89.9	91.7
90	78.3	81.8	84.9	87.5	89.9	91.9	93.8
92	80.0	83.6	86.8	89.5	91.9	94.0	95.8
94	81.8	85.5	88.6	91.4	93.9	96.0	97.9
96	83.5	87.3	90.5	93.4	95.9	98.0	100.0
98	85.2	89.1	92.4	95.3	97.8	100.1	102.1
100	87.0	90.9	94.3	97.3	99.8	102.1	104.2
102	88.7	92.7	96.2	99.2	101.8	104.2	106.3
104	90.5	94.5	98.1	101.1	103.8	106.2	108.3
106	92.2	96.4	100.0	103.1	105.8	108.3	110.4
108	93.9	98.2	101.8	105.0	107.8	110.3	112.5
110	95.7	100.0	103.7	107.0	109.8	112.3	114.6
112	97.4	101.8	105.6	108.9	111.8	114.4	116.7
114	99.2	103.6	107.5	110.9	113.8	116.4	118.8
116	100.9	105.5	109.4	112.8	115.8	118.5	120.8
118	102.6	107.3	111.3	114.8	117.8	120.5	122.9
120	104.4	109.1	113.2	116.7	119.8	122.6	125.0
122	106.1	110.9	115.0	118.6	121.8	124.6	127.1
124	107.9	112.7	116.9	120.6	123.8	126.6	129.2
126	109.6	114.6	118.8	122.5	125.8	128.7	131.3
128	111.3	116.4	120.7	124.5	127.8	130.7	133.3
130	113.1	118.2	122.6	126.4	129.8	132.8	135.4
132	114.8	120.0	124.5	128.4	131.8	134.8	137.5
134	116.5	121.8	126.4	130.3	133.8	136.9	139.6
136	118.3	123.6	128.3	132.3	135.8	138.9	141.7
138	120.0	125.5	130.1	134.2	137.8	140.9	143.8
140	121.8	127.3	132.0	136.2	139.8	143.0	145.8
142	123.5	129.1	133.9	138.1	141.8	145.0	147.9
144	125.2	130.9	135.8	140.0	143.8	147.1	150.0
146	127.0	132.7	137.7	142.0	145.8	149.1	152.1
148	128.7	134.6	139.6	143.9	147.8	151.2	154.2

TABLE 31 **Stump and Breast Height Diameter Tables for: Trembling Aspen all ages in Forest Inventory Zones A to J**

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.8	9.3	9.6	10.0	10.3	10.5	10.7
12	10.6	11.1	11.6	12.0	12.3	12.6	12.9
14	12.3	13.0	13.5	14.0	14.4	14.7	15.0
16	14.1	14.8	15.4	16.0	16.4	16.8	17.2
18	15.9	16.7	17.4	18.0	18.5	18.9	19.3
20	17.6	18.5	19.3	20.0	20.5	21.0	21.5
22	19.4	20.4	21.2	22.0	22.6	23.1	23.6
24	21.2	22.2	23.2	23.9	24.6	25.2	25.8
26	22.9	24.1	25.1	25.9	26.7	27.3	27.9
28	24.7	25.9	27.0	27.9	28.7	29.4	30.0
30	26.5	27.8	28.9	29.9	30.8	31.5	32.2
32	28.2	29.6	30.9	31.9	32.8	33.6	34.3
34	30.0	31.5	32.8	33.9	34.9	35.7	36.5
36	31.7	33.4	34.7	35.9	36.9	37.8	38.6
38	33.5	35.2	36.7	37.9	39.0	39.9	40.8
40	35.3	37.1	38.6	39.9	41.1	42.1	42.9
42	37.0	38.9	40.5	41.9	43.1	44.2	45.1
44	38.8	40.8	42.5	43.9	45.2	46.3	47.2
46	40.6	42.6	44.4	45.9	47.2	48.4	49.4
48	42.3	44.5	46.3	47.9	49.3	50.5	51.5
50	44.1	46.3	48.2	49.9	51.3	52.6	53.7
52	45.8	48.2	50.2	51.9	53.4	54.7	55.8
54	47.6	50.0	52.1	53.9	55.4	56.8	57.9
56	49.4	51.9	54.0	55.9	57.5	58.9	60.1
58	51.1	53.7	56.0	57.9	59.5	61.0	62.2
60	52.9	55.6	57.9	59.9	61.6	63.1	64.4
62	54.7	57.4	59.8	61.9	63.6	65.2	66.5
64	56.4	59.3	61.7	63.9	65.7	67.3	68.7
66	58.2	61.2	63.7	65.9	67.7	69.4	70.8
68	60.0	63.0	65.6	67.8	69.8	71.5	73.0
70	61.7	64.9	67.5	69.8	71.8	73.6	75.1
72	63.5	66.7	69.5	71.8	73.9	75.7	77.3
74	65.2	68.6	71.4	73.8	75.9	77.8	79.4
76	67.0	70.4	73.3	75.8	78.0	79.9	81.6
78	68.8	72.3	75.3	77.8	80.1	82.0	83.7

Equation Used:
DBH=DSIB+0.103886*DSIB*(2.3-SH)+0.492890*DSIB*Ln((SH+1.0)/2.3)
Based on 802 Trees. Standard Error of Estimated DBH = 1.55 cm

TABLE 31 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm — Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	70.5	74.1	77.2	79.8	82.1	84.1	85.9
82	72.3	76.0	79.1	81.8	84.2	86.2	88.0
84	74.1	77.8	81.0	83.8	86.2	88.3	90.1
86	75.8	79.7	83.0	85.8	88.3	90.4	92.3
88	77.6	81.5	84.9	87.8	90.3	92.5	94.4
90	79.4	83.4	86.8	89.8	92.4	94.6	96.6
92	81.1	85.2	88.8	91.8	94.4	96.7	98.7
94	82.9	87.1	90.7	93.8	96.5	98.8	100.9
96	84.6	88.9	92.6	95.8	98.5	100.9	103.0
98	86.4	90.8	94.6	97.8	100.6	103.0	105.2
100	88.2	92.7	96.5	99.8	102.6	105.1	107.3
102	89.9	94.5	98.4	101.8	104.7	107.2	109.5
104	91.7	96.4	100.3	103.8	106.7	109.3	111.6
106	93.5	98.2	102.3	105.8	108.8	111.4	113.8
108	95.2	100.1	104.2	107.8	110.8	113.5	115.9
110	97.0	101.9	106.1	109.8	112.9	115.6	118.0
112	98.8	103.8	108.1	111.7	114.9	117.7	120.2
114	100.5	105.6	110.0	113.7	117.0	119.8	122.3
116	102.3	107.5	111.9	115.7	119.1	121.9	124.5
118	104.0	109.3	113.8	117.7	121.1	124.0	126.6
120	105.8	111.2	115.8	119.7	123.2	126.2	128.8
122	107.6	113.0	117.7	121.7	125.2	128.3	130.9
124	109.3	114.9	119.6	123.7	127.3	130.4	133.1
126	111.1	116.7	121.6	125.7	129.3	132.5	135.2
128	112.9	118.6	123.5	127.7	131.4	134.6	137.4
130	114.6	120.5	125.4	129.7	133.4	136.7	139.5
132	116.4	122.3	127.4	131.7	135.5	138.8	141.7
134	118.1	124.2	129.3	133.7	137.5	140.9	143.8
136	119.9	126.0	131.2	135.7	139.6	143.0	145.9
138	121.7	127.9	133.1	137.7	141.6	145.1	148.1
140	123.4	129.7	135.1	139.7	143.7	147.2	150.2
142	125.2	131.6	137.0	141.7	145.7	149.3	152.4
144	127.0	133.4	138.9	143.7	147.8	151.4	154.5
146	128.7	135.3	140.9	145.7	149.8	153.5	156.7
148	130.5	137.1	142.8	147.7	151.9	155.6	158.8

TABLE 32 **Stump and Breast Height Diameter Tables for: Trembling Aspen all ages in Forest Inventory Zones K and L**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	8.8	9.3	9.6	10.0	10.2	10.5	10.7
12	10.6	11.1	11.6	12.0	12.3	12.6	12.8
14	12.4	13.0	13.5	13.9	14.3	14.7	15.0
16	14.2	14.8	15.4	15.9	16.4	16.8	17.1
18	15.9	16.7	17.4	17.9	18.4	18.9	19.2
20	17.7	18.6	19.3	19.9	20.5	20.9	21.4
22	19.5	20.4	21.2	21.9	22.5	23.0	23.5
24	21.2	22.3	23.1	23.9	24.6	25.1	25.6
26	23.0	24.1	25.1	25.9	26.6	27.2	27.8
28	24.8	26.0	27.0	27.9	28.7	29.3	29.9
30	26.5	27.8	28.9	29.9	30.7	31.4	32.0
32	28.3	29.7	30.9	31.9	32.7	33.5	34.2
34	30.1	31.5	32.8	33.9	34.8	35.6	36.3
36	31.9	33.4	34.7	35.9	36.8	37.7	38.5
38	33.6	35.3	36.6	37.8	38.9	39.8	40.6
40	35.4	37.1	38.6	39.8	40.9	41.9	42.7
42	37.2	39.0	40.5	41.8	43.0	44.0	44.9
44	38.9	40.8	42.4	43.8	45.0	46.1	47.0
46	40.7	42.7	44.4	45.8	47.1	48.2	49.1
48	42.5	44.5	46.3	47.8	49.1	50.3	51.3
50	44.2	46.4	48.2	49.8	51.2	52.4	53.4
52	46.0	48.2	50.2	51.8	53.2	54.5	55.6
54	47.8	50.1	52.1	53.8	55.3	56.6	57.7
56	49.6	52.0	54.0	55.8	57.3	58.7	59.8
58	51.3	53.8	55.9	57.8	59.4	60.7	62.0
60	53.1	55.7	57.9	59.8	61.4	62.8	64.1
62	54.9	57.5	59.8	61.8	63.4	64.9	66.2
64	56.6	59.4	61.7	63.7	65.5	67.0	68.4
66	58.4	61.2	63.7	65.7	67.5	69.1	70.5
68	60.2	63.1	65.6	67.7	69.6	71.2	72.6
70	61.9	64.9	67.5	69.7	71.6	73.3	74.8
72	63.7	66.8	69.4	71.7	73.7	75.4	76.9
74	65.5	68.7	71.4	73.7	75.7	77.5	79.1
76	67.3	70.5	73.3	75.7	77.8	79.6	81.2
78	69.0	72.4	75.2	77.7	79.8	81.7	83.3

Equation Used:
DBH=DSIB+0.097907*DSIB*(2.3-SH)+0.469721*DSIB*Ln((SH+1.0)/2.3)
Based on 1077 Trees. Standard Error of Estimated DBH = 1.50 cm

TABLE 32 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	70.8	74.2	77.2	79.7	81.9	83.8	85.5
82	72.6	76.1	79.1	81.7	83.9	85.9	87.6
84	74.3	77.9	81.0	83.7	86.0	88.0	89.7
86	76.1	79.8	82.9	85.7	88.0	90.1	91.9
88	77.9	81.6	84.9	87.6	90.1	92.2	94.0
90	79.6	83.5	86.8	89.6	92.1	94.3	96.1
92	81.4	85.4	88.7	91.6	94.2	96.4	98.3
94	83.2	87.2	90.7	93.6	96.2	98.4	100.4
96	85.0	89.1	92.6	95.6	98.2	100.5	102.6
98	86.7	90.9	94.5	97.6	100.3	102.6	104.7
100	88.5	92.8	96.4	99.6	102.3	104.7	106.8
102	90.3	94.6	98.4	101.6	104.4	106.8	109.0
104	92.0	96.5	100.3	103.6	106.4	108.9	111.1
106	93.8	98.3	102.2	105.6	108.5	111.0	113.2
108	95.6	100.2	104.2	107.6	110.5	113.1	115.4
110	97.3	102.1	106.1	109.6	112.6	115.2	117.5
112	99.1	103.9	108.0	111.5	114.6	117.3	119.7
114	100.9	105.8	109.9	113.5	116.7	119.4	121.8
116	102.7	107.6	111.9	115.5	118.7	121.5	123.9
118	104.4	109.5	113.8	117.5	120.8	123.6	126.1
120	106.2	111.3	115.7	119.5	122.8	125.7	128.2
122	108.0	113.2	117.7	121.5	124.9	127.8	130.3
124	109.7	115.0	119.6	123.5	126.9	129.9	132.5
126	111.5	116.9	121.5	125.5	128.9	132.0	134.6
128	113.3	118.8	123.4	127.5	131.0	134.1	136.7
130	115.0	120.6	125.4	129.5	133.0	136.2	138.9
132	116.8	122.5	127.3	131.5	135.1	138.2	141.0
134	118.6	124.3	129.2	133.5	137.1	140.3	143.2
136	120.3	126.2	131.2	135.5	139.2	142.4	145.3
138	122.1	128.0	133.1	137.4	141.2	144.5	147.4
140	123.9	129.9	135.0	139.4	143.3	146.6	149.6
142	125.7	131.8	136.9	141.4	145.3	148.7	151.7
144	127.4	133.6	138.9	143.4	147.4	150.8	153.8
146	129.2	135.5	140.8	145.4	149.4	152.9	156.0
148	131.0	137.3	142.7	147.4	151.5	155.0	158.1

TABLE 33 **Stump and Breast Height Diameter Tables for: Whitebark Pine all ages in Forest Inventory Zones A to L**

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
10	7.4	8.0	8.4	8.9	9.2	9.6	9.9
12	8.9	9.6	10.1	10.6	11.1	11.5	11.9
14	10.4	11.2	11.8	12.4	12.9	13.4	13.9
16	11.9	12.8	13.5	14.2	14.8	15.3	15.8
18	13.4	14.3	15.2	16.0	16.6	17.3	17.8
20	14.9	15.9	16.9	17.7	18.5	19.2	19.8
22	16.4	17.5	18.6	19.5	20.3	21.1	21.8
24	17.8	19.1	20.3	21.3	22.2	23.0	23.8
26	19.3	20.7	22.0	23.0	24.0	24.9	25.7
28	20.8	22.3	23.6	24.8	25.9	26.8	27.7
30	22.3	23.9	25.3	26.6	27.7	28.8	29.7
32	23.8	25.5	27.0	28.4	29.6	30.7	31.7
34	25.3	27.1	28.7	30.1	31.4	32.6	33.6
36	26.8	28.7	30.4	31.9	33.3	34.5	35.6
38	28.2	30.3	32.1	33.7	35.1	36.4	37.6
40	29.7	31.9	33.8	35.5	37.0	38.3	39.6
42	31.2	33.5	35.5	37.2	38.8	40.3	41.6
44	32.7	35.1	37.1	39.0	40.7	42.2	43.5
46	34.2	36.7	38.8	40.8	42.5	44.1	45.5
48	35.7	38.3	40.5	42.5	44.4	46.0	47.5
50	37.2	39.9	42.2	44.3	46.2	47.9	49.5
52	38.7	41.4	43.9	46.1	48.1	49.8	51.5
54	40.1	43.0	45.6	47.9	49.9	51.8	53.4
56	41.6	44.6	47.3	49.6	51.8	53.7	55.4
58	43.1	46.2	49.0	51.4	53.6	55.6	57.4
60	44.6	47.8	50.7	53.2	55.5	57.5	59.4
62	46.1	49.4	52.3	55.0	57.3	59.4	61.4
64	47.6	51.0	54.0	56.7	59.1	61.3	63.3
66	49.1	52.6	55.7	58.5	61.0	63.3	65.3
68	50.5	54.2	57.4	60.3	62.8	65.2	67.3
70	52.0	55.8	59.1	62.0	64.7	67.1	69.3
72	53.5	57.4	60.8	63.8	66.5	69.0	71.3
74	55.0	59.0	62.5	65.6	68.4	70.9	73.2
76	56.5	60.6	64.2	67.4	70.2	72.8	75.2
78	58.0	62.2	65.9	69.1	72.1	74.8	77.2

Equation Used:
DBH=DSIB+0.036171*DSIB*(2.3-SH)+0.482541*DSIB*Ln((SH+1.0)/2.3)
Based on 37 Trees. Standard Error of Estimated DBH = 1.66 cm

TABLE 33 (Concluded)

DSIB	Diameter Breast Height Outside Bark in cm						
	Stump Height in m						
(cm)	0.15	0.30	0.45	0.60	0.75	0.90	1.05
80	59.5	63.8	67.5	70.9	73.9	76.7	79.2
82	61.0	65.4	69.2	72.7	75.8	78.6	81.2
84	62.4	67.0	70.9	74.5	77.6	80.5	83.1
86	63.9	68.5	72.6	76.2	79.5	82.4	85.1
88	65.4	70.1	74.3	78.0	81.3	84.3	87.1
90	66.9	71.7	76.0	79.8	83.2	86.3	89.1
92	68.4	73.3	77.7	81.5	85.0	88.2	91.1
94	69.9	74.9	79.4	83.3	86.9	90.1	93.0
96	71.4	76.5	81.1	85.1	88.7	92.0	95.0
98	72.8	78.1	82.7	86.9	90.6	93.9	97.0
100	74.3	79.7	84.4	88.6	92.4	95.8	99.0
102	75.8	81.3	86.1	90.4	94.3	97.8	100.9
104	77.3	82.9	87.8	92.2	96.1	99.7	102.9
106	78.8	84.5	89.5	94.0	98.0	101.6	104.9
108	80.3	86.1	91.2	95.7	99.8	103.5	106.9
110	81.8	87.7	92.9	97.5	101.7	105.4	108.9
112	83.2	89.3	94.6	99.3	103.5	107.3	110.8
114	84.7	90.9	96.3	101.0	105.4	109.3	112.8
116	86.2	92.5	97.9	102.8	107.2	111.2	114.8
118	87.7	94.0	99.6	104.6	109.1	113.1	116.8
120	89.2	95.6	101.3	106.4	110.9	115.0	118.8
122	90.7	97.2	103.0	108.1	112.8	116.9	120.7
124	92.2	98.8	104.7	109.9	114.6	118.8	122.7
126	93.7	100.4	106.4	111.7	116.4	120.8	124.7
128	95.1	102.0	108.1	113.5	118.3	122.7	126.7
130	96.6	103.6	109.8	115.2	120.1	124.6	128.7
132	98.1	105.2	111.4	117.0	122.0	126.5	130.6
134	99.6	106.8	113.1	118.8	123.8	128.4	132.6
136	101.1	108.4	114.8	120.5	125.7	130.3	134.6
138	102.6	110.0	116.5	122.3	127.5	132.3	136.6
140	104.1	111.6	118.2	124.1	129.4	134.2	138.6
142	105.5	113.2	119.9	125.9	131.2	136.1	140.5
144	107.0	114.8	121.6	127.6	133.1	138.0	142.5
146	108.5	116.4	123.3	129.4	134.9	139.9	144.5
148	110.0	118.0	125.0	131.2	136.8	141.9	146.5